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1962

Results of the Cooperative Uniform Soybean Tests Part I. North Central States 1962

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RESULTS OF THE COOPERATIVE UNIFORM SOYBEAN TESTS

PART I. NORTH CENTRAL STATES

****
1962
****

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INTRODUCTION

The U. S. Regional Soybean Laboratory was organized in 1936 under the Bankhead-Jones Act, as a cooperative project by the U. S. Department of Agriculture and the twelve Agricultural Experiment Stations of the North Central Region. In 1942, the work of the Laboratory was expanded to include cooperation with twelve Agricultural Experiment Stations in the Southern Region also. At present, six other states and two provinces in Canada are also cooperating informally in the Laboratory research program, which is directed toward the breeding of improved varieties and strains of soybeans for industrial use and the obtaining of fundamental information necessary to the efficient development of strains to meet specific needs.

The purpose of the Uniform Soybean Tests is to evaluate critically the best of the experimental soybean lines being developed through the cooperative breeding research program. Ten of these tests, corresponding to ten maturity groups, have been established, with Test 00 including the very early strains for the northern fringe of the present area of soybean production. Uniform Tests 0 through IV, respectively, include strains adapted to locations farther south in the North Central States and areas of similar latitude. In general, each group is arranged to include strains differing in maturity by 10 days or less.

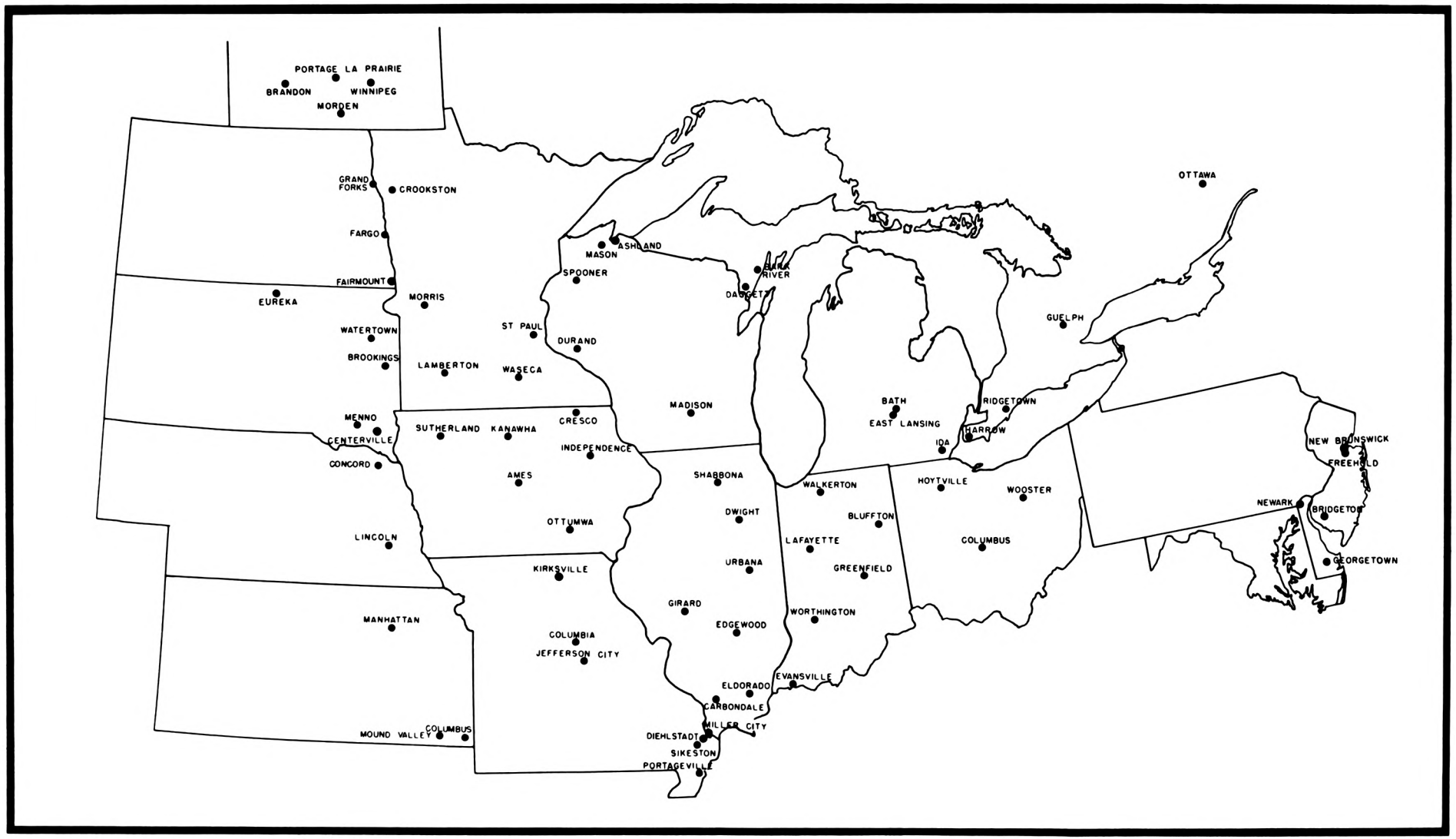
The summary of performance of strains in the first six Uniform Tests is included in Part I of this report. Information on the last four tests, which include strains adapted to the southern part of the United States, is contained in Part II, which is issued separately.

Most of the Uniform Tests in the North Central Region are grown in rod-row size plots, using four replications. Tie varieties and extra strains differing in maturity from the test strains are separated from the rest of the test by border rows to minimize competition. As the result of recent studies showing that fewer locations are necessary to measure chemical composition with the same precision as yield, the number of locations from which chemical data were obtained was reduced to about half of the test locations.

Uniform Preliminary Tests are grown at a limited number of locations throughout the region to screen the best experimental strains for maturity and general agronomic performance before they are entered in the Uniform Tests. At most locations these nurseries are grown in rod-row plots with two replications. Interest in the Preliminary Tests has been increasing as the importance of early evaluation of strains over a wider range in environmental conditions has been demonstrated. This year there were Preliminary Tests for all of the maturity groups.

Daily rainfall and maximum and minimum temperature graphs, together with a brief statement of growing conditions during the 1962 growing season, are included for most of the nursery locations as an aid to interpretation of the agronomic and chemical data. The 1962 yields for Uniform Test 00 were similar to those for 1961, protein contents of the seed were about 2 percent lower and oil contents nearly 0.4 percent higher. For the later groups, yields were generally lower in 1962 and oil contents also lower. When compared to 1961, the 1962 soybean crop has been characterized by processors as having a low oil content.

Four new soybean varieties, Harosoy 63, Hawkeye 63, Lindarin 63, and Clark 63, were released to seed producers in the Spring of 1963. All of the new strains, which were developed by the backcross method, carry Phytophthora rot resistance contributed by the Blackhawk variety. The Clark 63 strain also carries resistance to bacterial pustule contributed by the CNS variety. These four soybean varieties are the first to be developed by backcrossing specifically to incorporate disease resistance, with Clark 63 carrying multiple resistance to two serious diseases.



MAP OF THE NORTH CENTRAL STATES SHOWING LOCATION OF THE COOPERATIVE UNIFORM SOYBEAN TESTS

UNIFORM TEST LOCATIONS - 1962

Location	Cooperator	Uniform Tests						Preliminary Tests					
		00	0	I	II	III	IV	00	0	I	II	III	IV
Ottawa, Ont.	L. S. Donovan, Central Exp. Farm	x	x					x	x				
Guelph, Ont.	G. E. Jones, Ont. Agr. Col.	x	x										
Ridgetown, Ont.	W. W. Snow, W. Ont. Agr. School		x	x	x				x	x	x		
Harrow, Ont.	R. I. Buzzell and C. G. Mortimore, Canada D. A. Res. Sta.				x						x		
Freehold, N. J.	J. C. Anderson, N. J. A.E.S.				x	x	x						
Georgetown, Del.	R. H. Cole, Univ. Substa. Div.				x	x	x					x	x
Hoytville, Ohio	Northwestern Substa.			x	x	x				x	x	x	
Wooster, Ohio	Ohio A.E.S.			x	x	x				x	x	x	
Columbus, Ohio	P. E. Smith, Ohio State Univ.		x	x	x	x	x			x	x	x	
East Lansing, Mich.	H. M. Brown, Mich. A.E.S.	x	x	x	x			x	x	x	x		
Ida, Mich.	Stotz Brothers, Coop.			x	x								
Walkerton, Ind.	Frank Pulver, Coop.			x	x								
Bluffton, Ind.	Gerald Bayless, Coop.				x	x							
Lafayette, Ind.	O. W. Luetkemeier, Purdue A.E.S.			x	x	x					x	x	
Greenfield, Ind.	Mrs. Raymond Roney, Coop.				x	x							
Worthington, Ind.	Frederic Sloan, Coop.				x	x	x					x	x
Ashland, Wis.	Garit H. Tenpas, Univ. Exp. Farm	x						x					
Spooner, Wis.	C. O. Rydberg, Univ. Exp. Sta.		x						x				
Durand, Wis.	Anton Sam, Coop.		x	x									
Madison, Wis.	J. H. Torrie, Wis. A.E.S.			x	x					x	x		
Shabbona, Ill.	R. R. Bell, N. Ill. Exp. Field			x	x								
Dwight, Ill.	Harry Henderson, Coop.			x	x								
Urbana, Ill.	C. H. Farnham, Ill. A.E.S.			x	x	x					x	x	
Girard, Ill.	Lloyd Brothers, Coop.				x	x						x	
Edgewood, Ill.	John Wilson, Coop.				x	x	x						
Eldorado, Ill.	Marshall Grisham, Coop.					x	x						x
Carbondale, Ill.	D. R. Browning, Southern Ill. U.					x	x						x
Miller City, Ill.	M. B. Patton, Coop.						x						
Crookston, Minn.	O. C. Soine, Coop.	x	x										
Morris, Minn.	Roy L. Thompson, Coop.		x										
Lamberton, Minn.	W. W. Nelson, Coop.				x								
Waseca, Minn.	John R. Thompson, Coop.			x	x								
Sutherland, Iowa	Galva-Primghar Exp. Farm				x								
Kanawha, Iowa	Northern Iowa Exp. Assoc.			x	x					x	x		
Independence, Iowa	Carrington-Clyde Exp. Assoc.				x								
Ames, Iowa	Iowa Agr. Exp. Sta.				x	x					x	x	
Ottumwa, Iowa	A. E. Newquist, Coop.					x						x	
Columbia, Mo.	Mo. Agr. Exp. Sta.				x	x	x				x	x	x
Portageville, Mo.	Arnold Matson, Mo. Delta Center						x						
Portage la Prairie, Man.	W. O. Chubb, Coop.	x						x					
Brandon, Man.	H. Gross, Exp. Farm	x											
Morden, Man.	John Giesbrecht, Exp. Farm	x						x					
Eureka, S. D.	S. D. North Central Substa.		x	x					x	x			
Watertown, S. D.	S. D. Agr. Exp. Sta.		x	x					x	x			
Brookings, S. D.	C. J. Franzke, S. D. A.E.S.			x						x			

UNIFORM TEST LOCATIONS - 1962 (Continued)

Location	Cooperator	Uniform Tests						Preliminary Tests					
		00	0	I	II	III	IV	00	0	I	II	III	IV
Centerville, S. D.	S. D. Agr. Exp. Sta.				x						x		
Lincoln, Nebr.	J. H. Williams, Nebr. A.E.S.				x	x						x	
Manhattan, Kans.	E. L. Mader, Kans. A.E.S.					x	x					x	x
Mound Valley, Kans.	R. N. Ford, Branch Exp. Sta.						x						
Columbus, Kans.	V. H. Peterson, Columbus Exp. Field						x						
Othello, Wash.	Irrig. Exp. Sta.		x	x					x	x			
Prosser, Wash.	C. E. Nelson, Irrig. Exp. Sta.		x	x					x	x			
Ontario, Ore.	L. A. Fitch, Malheur Br. E.S.	x	x	x				x	x	x			
Medford, Ore.	John A. Yungen, S. Ore. Br. E.S.	x	x										

METHODS

All Uniform and Preliminary Tests are planted in replicated single rod-row plots with four replications for the Uniform Tests and two replications for the Preliminary Tests. Usually 18 to 20 feet of row is planted and only 16 or 16½ feet harvested. Seeds are planted on the basis of 200 viable seeds per row.

Yield is measured after the seeds have been dried to a uniform moisture content and is reported in bushels per acre.

Maturity is taken as the date when approximately 95% of the pods are ripe and most of the leaves have dropped. Green stems are not to be considered in determining maturity but should be noted separately. Maturity is expressed as days earlier (-) or later (+) than the average of a standard reference variety. Reference varieties used for the Uniform Tests are as follows: Group 00, Acme; Group 0, Grant; Group I, Chippewa; Group II, Hawkeye; Group III, Shelby; and Group IV, Clark.

To make it possible to compare maturities of strains in different tests, the following tie varieties are included in the Uniform Tests: Flambeau (Group 00) in Uniform Test 0; Grant (Group 0) in Uniform Test I; Blackhawk (Group I) and Ford (Group III) in Uniform Test II; and Clark (Group IV) in Uniform Test III. These are separated from the rest of the test by border rows in order to minimize competition effects, and only maturity data are reported.

Lodging notes are taken at maturity and recorded on a scale of 1 to 5 according to the following degrees of lodging:

1 Almost all plants erect
2 All plants leaning slightly or a few plants down
3 All plants leaning moderately, or 25% to 50% of the plants down
4 All plants leaning considerably, or 50% to 80% of the plants down
5 Almost all plants down

Height is reported as the average length in inches of plants from the ground to the tip of the stem at time of maturity.

Seed Quality is rated from 1 to 5 according to the following scale:

1 - Very good	3 - Fair	5 - Very poor
2 - Good	4 - Poor	

The factors considered in estimating seed quality are: seed development, wrinkling, damage, and objectionable color for the variety.

Seed Weight is recorded as weight (in grams) per 100 seeds.

Chemical Composition of the seed is determined on samples submitted to the Laboratory headquarters in Urbana. Percentages of oil and protein are determined on a composite sample of all replications for each strain and are expressed on a moisture-free basis.

Calculating Summary Means. In cases where the lodging and seed quality notes are all the same at a location, indicating no expression of strain differences, these locations are not included in the mean for these traits. Where the C. V. of yield

is greater than 20% at a location or where yields are unusually low, this location is not included in the strain means.

Disease Reactions are listed according to the Soybean Disease Classification Standards, March 1955, unless otherwise specified. The disease reaction is listed 1-5. The state where the test was made is identified in the column heading, and a small letter "a" or "n" under the state signifies artificial or natural infection. When the reaction is given by letter instead of numbers, R signifies resistant, S stands for susceptible, and I for intermediate. Seg. indicates that a strain is segregating for disease reaction.

Strain Designation. In order to simplify strain designations and indicate state of origin for entries in the Uniform Tests, the following code letters to precede strain numbers have been agreed upon in meetings of experiment station agronomists collaborating with the U. S. Regional Soybean Laboratory.

Code Letter	State	Code Letter	State
UD	Delaware	Au	Alabama
L	Illinois	R	Arkansas
C	Indiana	B	California
A	Iowa	F	Florida
K	Kansas	Ga	Georgia
Me	Maine	La	Louisiana
E	Michigan	Md	Maryland
M	Minnesota	D	Mississippi
S	Missouri	N	North Carolina
U	Nebraska	Ok	Oklahoma
ND	North Dakota	SC	South Carolina
H	Ohio	UT	Tennessee
SD	South Dakota	TS	Texas
W	Wisconsin	V	Virginia
UM	Manitoba, Canada		
O	Ontario, Canada		

SL Two or More States

It is suggested that states cooperating in these Uniform Tests use these letters to designate their strains.

UNIFORM TEST 00 - 1962

Strain	Originating Agency	Origin	Generation Composited
Acme	Central Exp. Farm, Ottawa, Ont.	Sel. from Pagoda	
Flambeau	Wis. Agr. Exp. Sta.	Introduction from Russia	
0-57-2921	Central Exp. Farm, Ottawa, Ont.	Blackhawk x Capital	F_7
UM4	Univ. of Manitoba, Winnipeg, Man.	Acme x Comet	F_5
UM5	Univ. of Manitoba, Winnipeg, Man.	Acme x Comet	F_5
UM7	Univ. of Manitoba, Winnipeg, Man.	Blackhawk x PI 194633	F_5

Identification of Parent Strain

PI 194633 733-4, sel. from 193-7-27 x Blackeye by Sven A. Holmberg, Norrkoping, Sweden.

Data are reported from ten locations for the two checks and four experimental strains in this test. Two of the strains, UM4 and UM5, have been in this test for three years, and a summary of these data is given in Tables 6 and 7. They have averaged higher than Acme and nearly as high as Flambeau in yield. They were considerably earlier than Flambeau and not as tall but showed much better lodging resistance.

UM7 was in this test in 1961. In both years its yield has been below the other two UM strains and it was more susceptible to lodging. 0-57-2921 was an entry in the 1960 and 1961 Uniform Test 0. It performed very well for its maturity, and this year it is the highest yielding strain in Uniform Test 00. It outyielded Flambeau by over two bushels on the average, was slightly earlier, almost as tall, and much better in lodging resistance. In addition, it appears to equal Flambeau in resistance to bacterial blight and is resistant to Phytophthora.

Table 1. Summary of data for Uniform Test 00, 1962.

Strain	Yield	Rank	Maturity[1]	Lodging	Height	Seed Quality	Seed Weight	Seed Composition	
								Protein	Oil
No. of Tests	8	8	7	5	8	6	7	5	5
Acme	25.8	5	0	1.4	27	2.8	17.1	39.6	19.2
Flambeau	28.4	4	+9.4	3.4	34	3.1	15.2	39.7	19.2
0-57-2921	30.8	1	+7.9	1.9	33	2.8	13.3	38.7	19.7
UM4	29.0	2	+0.3	1.8	28	2.8	17.5	38.9	19.4
UM5	28.5	3	+2.7	2.0	30	2.9	17.6	38.6	19.4
UM7	25.8	5	+1.6	2.7	30	3.0	16.6	40.9	19.5

[1]Days earlier (-) or later (+) than Acme which matured September 13, 110 days after planting.

Table 2. Disease data for Uniform Test 00, 1962.

Strain	Bacterial Blight			Bacterial Pustule		Brown Stem Rot	Phytophthora Rot
	Man.	Ill.	Ia.	Ill.	Ia.	Ill.	Ind.
	n[1]	a[1]	a	a	a	n	a
Acme	3.7	4	3	3	4	4	
Flambeau	1.5	2	3	3	4	4	
0-57-2921	1.5	2	3	4	4	4	R
UM4	3.3	3	3	3	3	4	S
UM5	3.3	4	3	4	4	4	S
UM7	2.3	3	3	2	4	4	R

[1]n = natural infection; a = artificial inoculation.

Table 3. Yield, yield rank, and maturity, days earlier (-) or later (+) than Acme, for Uniform Test 00, 1962.

Strain	Mean of 8 Tests	Ottawa Ont.[1]	Guelph Ont.	East Lansing Mich.	Ashland Wis.	Crookston Minn.	Portage la Prairie Man.	Brandon Man.	Morden Man.	Ontario Ore.[1] *	Medford Ore.[1] *
Acme	25.8	31.5	16.3	26.2	30.7	12.6	31.3	41.3	16.5	50.1	26.1
Flambeau	28.4	38.6	28.1	30.7	30.0	19.6	29.2	32.2	19.0	47.8	27.8
0-57-2921	30.8	43.6	23.2	29.6	30.8	21.1	39.9	39.2	18.9	55.8	35.4
UM4	29.0	36.4	20.8	28.7	34.8	14.2	34.7	45.2	17.3	51.1	29.9
UM5	28.5	37.0	21.2	28.2	33.0	16.3	32.3	42.8	17.4	54.8	32.1
UM7	25.8	31.4	19.3	27.2	31.4	11.1	30.6	40.1	15.5	43.9	26.9
Coef. of Var.(%)		8.9	8.8	8.4	7.7	5.5	7.1	6.0	6.9	4.8	9.7
L.S.D.(5%)		4.9	3.2	NS	3.5	2.6	3.5	7.9	1.8	3.7	4.3
Row Spacing(In.)		30	27	24	24	24	30	36	36	20	24

	Yield Rank										
										*	*
Acme	5	5	6	6	5	5	4	3	5	4	6
Flambeau	4	2	1	1	6	2	6	6	1	5	4
0-57-2921	1	1	2	2	4	1	1	5	2	1	1
UM4	2	4	4	3	1	4	2	1	4	3	3
UM5	3	3	3	4	2	3	3	2	3	2	2
UM7	5	6	5	5	3	6	5	4	6	6	5

	Mean of 7 Tests	Maturity									
										*	*
Acme	0	0	0	0	0	0		0	0	0	0
Flambeau	+9.4	+12	+11	+2	+13	+8		+10	+10	+12	+4
0-57-2921	+7.9	+ 9	+10	0	+ 7	+6		+10	+13	+ 6	0
UM4	+0.3	+ 2	+ 1	0	- 3	+1		0	+ 1	+ 1	-1
UM5	+2.7	+ 2	+ 4	0	+ 3	+2		+ 7	+ 1	+ 4	-2
UM7	+1.6	+ 3	0	+1	- 4	+3		+ 7	+ 1	+ 2	+1
Date planted		5-26	5-17	5-25	5-28	5-28	5-29	6-6	5-24	6-2	5-9	5-3
Acme matured		9-13	9-15	9-7	9-13	9-27	9-8	--	9-18	9-7	8-26	9-12
Days to mature		110	121	105	108	122	102	--	117	97	109	132

*Not included in the mean.
[1]Irrigated.

Table 4. Lodging, plant height, and seed quality for Uniform Test 00, 1962.

Strain	Mean of 5 Tests	Ottawa Ont.[1]	Guelph Ont.	East Lansing Mich.	Ashland Wis.	Crookston Minn.	Portage la Prairie Man.	Brandon Man.	Morden Man.	Ontario Ore.[1]	Medford Ore.[1]
			*					*		*	*
Acme	1.4	1.0	1.0	1.0	2.0		2.0	1.0	1.0	1.0	3.0
Flambeau	3.4	3.0	1.0	3.0	3.0		5.0	1.0	3.0	5.0	4.0
0-57-2921	1.9	1.0	1.0	1.0	1.0		5.0	1.0	1.3	1.0	3.0
UM4	1.8	1.0	1.0	1.0	2.0		4.0	1.0	1.0	1.0	3.0
UM5	2.0	2.0	1.0	1.0	2.0		4.0	1.0	1.0	2.5	3.0
UM7	2.7	3.0	1.0	1.0	3.0		5.0	1.0	1.3	1.5	4.0
	Mean of 8 Tests	Plant Height									
										*	*
Acme	27	32	26	28	29	19	38	20	26	28	41
Flambeau	34	36	31	30	30	26	55	28	33	50	57
0-57-2921	33	34	31	32	32	24	50	29	33	31	45
UM4	28	30	26	30	30	20	43	21	27	29	42
UM5	30	32	27	31	29	20	53	21	27	30	42
UM7	30	30	24	30	29	21	49	22	31	29	45
	Mean of 6 Tests	Seed Quality									
					*				*	*	*
Acme	2.8	4.0	2.8	3.0	2.0	3.0	2.0	2.0	1.0	1.5	3.0
Flambeau	3.1	3.0	3.0	2.0	2.0	3.3	4.0	3.0	1.0	2.5	4.0
0-57-2921	2.8	2.0	3.3	2.0	2.0	3.5	4.0	2.0	1.0	2.0	3.0
UM4	2.8	3.0	2.5	3.0	2.0	3.3	3.0	2.0	1.0	1.5	2.0
UM5	2.9	4.0	2.5	3.0	2.0	3.0	2.0	3.0	1.0	1.5	2.0
UM7	3.0	2.0	2.8	3.0	2.0	3.0	3.0	4.0	1.0	2.5	3.0

*Not included in the mean.
[1]Irrigated.

Table 5. Percentages of protein and oil for Uniform Test 00, 1962.

Strain	Mean of 5 Tests	Ottawa Ont.	East Lansing Mich.	Ash-land Wis.	Crooks-ton Minn.	Mor-den Man.	On-tario Ore.[1] *
Acme	39.6	42.5	44.2	39.5	37.6	34.1	39.5
Flambeau	39.7	43.7	44.3	40.5	35.9	34.2	42.1
0-57-2921	38.7	41.5	43.6	38.7	36.7	33.1	41.2
UM4	38.9	41.6	42.5	40.0	36.7	33.6	40.5
UM5	38.6	42.3	42.8	38.6	36.6	32.7	40.8
UM7	40.9	42.9	45.5	42.2	37.7	36.1	42.8

	Mean of 5 Tests	Percentage of Oil					*
Acme	19.2	17.4	18.8	17.1	21.5	21.3	19.7
Flambeau	19.2	17.5	18.8	17.8	21.4	20.3	17.0
0-57-2921	19.7	18.8	19.3	17.8	21.5	20.9	19.0
UM4	19.4	18.1	19.1	17.6	21.0	21.2	18.7
UM5	19.4	17.9	19.0	17.7	21.1	21.1	19.3
UM7	19.5	18.0	18.8	17.8	21.3	21.4	18.1

*Not included in the mean.
[1]Irrigated.

Table 6. Three-year summary of data for Uniform Test 00, 1960-1962.

Strain	Yield	Rank	Maturity[1]	Lodging	Height	Seed Quality	Seed Weight	Seed Composition	
								Protein	Oil
No. of Tests	34	34	31	26	34	30	28	31	31
Acme	26.2	4	0	1.9	28	2.5	16.9	40.5	19.3
Flambeau	29.8	1	+9.7	3.2	32	2.8	15.9	41.2	19.1
UM4	28.9	2	+0.7	1.7	29	2.5	17.0	39.8	19.5
UM5	28.6	3	+3.3	2.0	30	2.6	16.8	39.9	19.5

[1]Days earlier (-) or later (+) than Acme which matured September 10, 107 days after planting.

Table 7. Three-year summary of yield and yield rank for Uniform Test 00, 1960-1962.

Strain	Mean of 34 Tests	Orono Maine	Ottawa Ont.	Guelph Ont.	East Lansing Mich.	Ashland Wis.	Mason Wis.	Spooner Wis.
Years Tested		1960-1961	1960-1962	1960-1962	1960-1962	1960-1962	1960-1961	1960-1961
Acme	26.2	21.2	31.0	27.7	24.9	28.3	27.2	15.9
Flambeau	29.8	26.8	38.7	34.4	29.2	31.3	27.2	21.2
UM4	28.9	26.5	35.2	28.9	25.6	32.3	27.7	16.3
UM5	28.6	23.9	35.6	29.8	26.0	33.0	26.3	17.9
	Yield Rank							
Acme	4	4	4	4	4	4	2	4
Flambeau	1	1	1	1	1	3	2	1
UM4	2	2	3	3	3	2	1	3
UM5	3	3	2	2	2	1	4	2

Table 7. (Continued)

Strain	Crookston Minn.	St. Paul Minn.	Portage la Prairie Man.	Winnipeg Man.	Brandon Man.	Morden Man.	Ontario Ore.	Medford Ore.
Years Tested	1960-1962	1960-1961	1960-1962	1960-1961	1960-1962	1960-1962	1960-1962	1961-1962
Acme	20.3	25.5	38.6	20.2	21.2	14.2	50.0	29.6
Flambeau	28.6	28.5	40.1	21.4	20.6	17.6	51.5	33.0
UM4	23.1	29.9	43.8	19.9	24.2	14.6	52.8	28.3
UM5	22.6	31.1	41.7	18.8	23.3	15.7	55.6	31.6
	Yield Rank							
Acme	4	4	4	2	3	4	4	3
Flambeau	1	3	3	1	4	1	3	1
UM4	2	2	1	3	1	3	2	4
UM5	3	1	2	4	2	2	1	2

UNIFORM PRELIMINARY TEST 00 - 1962

Strain	Originating Agency	Origin	Generation Composited
Acme	Central Exp. Farm, Ottawa, Ont.	Sel. from Pagoda	
Flambeau	Wis. Agr. Exp. Sta.	Introduction from Russia	
M384	Minn. A.E.S. & U.S.R.S.L.	Renville x Capital	F_5
M387	Minn. A.E.S. & U.S.R.S.L.	Renville x Capital	F_5
M388	Minn. A.E.S. & U.S.R.S.L.	Renville x Capital	F_5
UM9	Univ. of Manitoba, Winnipeg, Man.	M10 x PI 194633	F_5
UM10	Univ. of Manitoba, Winnipeg, Man.	M10 x PI 194633	F_6
UM11	Univ. of Manitoba, Winnipeg, Man.	Blackhawk x PI 194633	F_6
UM12	Univ. of Manitoba, Winnipeg, Man.	0-52-903 x Flambeau	F_5
UM13	Univ. of Manitoba, Winnipeg, Man.	0-52-903 x Flambeau	F_5

Identification of Parent Strains

M10	Sel. from Lincoln (2) x Richland.
0-52-903	753-1, sel. by Sven A. Holmberg; same as PI 194654.
PI 194633	733-4, sel. from 193-7-27 x Blackeye by Sven A. Holmberg, Norrkoping, Sweden.

Data were reported from six locations for the two varieties and eight experimental strains in this test. Only two strains outyielded the Flambeau check, UM13 and M384. UM13, despite its early maturity, had the highest mean yield in the test, was nearly as tall as Flambeau, and possessed some improvement in lodging resistance. M384 yielded and matured about the same as Flambeau but was much more erect and somewhat shorter and had a higher oil content. The other two M strains were similar to M384 although averaging a little lower in yield. UM9 and UM11 outyielded Acme and were only two days later. They had appreciably higher oil percentages than the checks but both had high lodging scores.

Table 8. Summary of data for Uniform Preliminary Test 00, 1962.

Strain	Yield	Rank	Maturity[1]	Lodging	Height	Seed Quality	Seed Weight	Seed Composition	
								Protein	Oil
No. of Tests	5	5	3	5	5	5	4	4	4
Acme	26.9	8	0	1.8	29	2.4	19.5	40.4	18.7
Flambeau	30.0	3	+11.3	3.1	34	2.8	16.9	41.0	18.4
M384	30.4	2	+10.7	1.8	30	2.4	15.1	39.5	19.6
M387	28.8	6	+13.0	1.8	32	3.4	14.0	38.9	19.7
M388	29.3	5	+11.0	1.8	31	2.4	15.7	38.6	20.3
UM9	28.6	7	+ 2.0	3.4	30	2.8	20.0	38.8	20.0
UM10	25.1	9	+ 2.3	3.0	28	3.0	20.0	40.4	19.8
UM11	29.5	4	+ 2.0	3.0	30	2.6	16.3	39.8	20.2
UM12	24.7	10	- 0.3	2.4	29	2.6	20.6	41.0	19.9
UM13	31.5	1	+ 4.0	2.3	32	3.0	18.8	41.1	19.0

[1]Days earlier (-) or later (+) than Acme which matured September 26, 115 days after planting.

Table 9. Disease data for Uniform Preliminary Test 00, 1962.

Strain	Bacterial Blight		Bacterial Pustule	Brown Stem Rot
	Man.	Ill.	Ill.	Ill.
	n[1]	a[1]	a	n
Acme	3.5	4	3	4
Flambeau	1.5	2	3	4
M384	1.5	2	4	4
M387	1.5	4	2	4
M388	1.0	3	3	4
UM9	2.0	4	4	4
UM10	3.0	3	3	4
UM11	2.5	4	4	4
UM12	2.5	4	4	4
UM13	2.5	4	4	4

[1]n = natural infection; a = artificial inoculation.

Table 10. Yield and yield rank for Uniform Preliminary Test 00, 1962.

Strain	Mean of 5 Tests	Ottawa Ont.[1]	East Lansing Mich.	Ashland Wis.	Portage la Prairie Man.	Morden Man.	Ontario Ore.[1] *
Acme	26.9	29.7	26.1	32.1	32.6	14.0	48.1
Flambeau	30.0	39.2	29.8	28.2	39.3	13.3	52.4
M384	30.4	42.8	26.5	28.3	44.8	9.6	57.9
M387	28.8	41.1	26.0	30.7	34.7	11.5	57.3
M388	29.3	40.4	26.8	29.3	39.2	10.8	49.2
UM9	28.6	34.2	26.9	28.0	38.8	15.0	48.2
UM10	25.1	24.5	25.2	27.6	37.1	10.9	49.0
UM11	29.5	38.1	26.3	30.8	40.1	12.3	52.9
UM12	24.7	31.1	27.0	26.5	28.5	10.4	45.4
UM13	31.5	37.3	27.4	38.5	41.5	12.6	53.8
Coef. of Var. (%)		10.9	12.4	10.8	5.1	10.9	6.2
L.S.D. (5%)		8.5	NS	NS	2.5	NS	7.2
Row Spacing (In.)		30	24	24	30	36	20

	Yield Rank						
							*
Acme	8	9	8	2	9	2	9
Flambeau	3	4	1	7	4	3	5
M384	2	1	6	6	1	10	1
M387	6	2	9	4	8	6	2
M388	5	3	5	5	5	8	6
UM9	7	7	4	8	6	1	8
UM10	9	10	10	9	7	7	7
UM11	4	5	7	3	3	5	4
UM12	10	8	3	10	10	9	10
UM13	1	6	2	1	2	4	3

*Not included in the mean.
[1]Irrigated.

Table 11. Maturity, days earlier (-) or later (+) than Acme, for Uniform Preliminary Test 00, 1962.

Strain	Mean of 3 Tests	Ottawa Ont.[1]	East Lansing Mich. *	Ashland Wis.	Portage la Prairie Man. *	Morden Man.	Ontario Ore.[1] *
Acme	0	0		0		0	0
Flambeau	+11.3	+10		+16		+ 8	+10
M384	+10.7	+10		+10		+12	+ 9
M387	+13.0	+13		+12		+14	+ 7
M388	+11.0	+ 9		+14		+10	+ 9
UM9	+ 2.0	+ 2		+ 4		0	+ 7
UM10	+ 2.3	+ 2		+ 5		0	+ 1
UM11	+ 2.0	0		+ 6		0	+ 2
UM12	- 0.3	+ 2		- 2		- 1	+ 2
UM13	+ 4.0	+ 7		0		+ 5	+ 7
Date planted	5-26	5-17	5-28	5-28	6-6	6-2	5-9
Acme matured	9-18	9-16	--	9-28	--	9-9	8-26
Days to mature	115	122	--	123	--	99	109

*Not included in the mean.
[1]Irrigated.

UNIFORM TEST O - 1962

Strain	Originating Agency	Origin	Generation Composited
Grant	Wis. A.E.S. & U.S.R.S.L.	Lincoln x Seneca	F_6
Merit	Central Exp. Farm, Ottawa, Ont.	Blackhawk x Capital	F_8
Norchief	Wis. A.E.S. & U.S.R.S.L.	Hawkeye x Flambeau	F_4
O-4323	Research Station, Harrow, Ont.	Capital x Hardome	F_7
O-56-2678	Central Exp. Farm, Ottawa, Ont.	Blackhawk x Capital	F_7
O-57-2826	Central Exp. Farm, Ottawa, Ont.	Adams x A3K-884	F_{12}
O-57-2905	Central Exp. Farm, Ottawa, Ont.	Blackhawk x Capital	F_8
O-57-2909	Central Exp. Farm, Ottawa, Ont.	Blackhawk x Capital	F_8

Identification of Parent Strain

A3K-884	Sel. from Mukden x Richland, progenitor of Blackhawk.

Data were reported from 15 locations in 1962 for the three check varieties and five experimental strains in this test. One strain, O-4323, has been in the test for two years while the remaining four were entered from last year's Preliminary Test O. All of the experimental strains performed well in 1962, outyielding the check varieties of similar maturity, and they were appreciably taller, which is an important attribute for Group O varieties.

Table 12. Summary of data for Uniform Test 0, 1962.

Strain	Yield	Rank	Maturity[1]	Lodging	Height	Seed Quality	Seed Weight	Seed Composition	
								Protein	Oil
No. of Tests	9	9	7	6	9	7	8	6	6
Grant	28.5	3	0	2.9	31	2.1	15.5	40.5	19.8
Merit	26.3	7	-3.6	2.4	31	1.9	14.1	40.4	20.3
Norchief	24.7	8	-3.0	2.4	29	2.4	15.8	41.4	19.9
0-4323	29.0	2	-5.1	2.2	33	2.8	15.4	42.4	19.8
0-56-2678	28.5	3	-1.6	2.4	36	2.4	15.0	41.8	19.3
0-57-2826	30.3	1	+0.1	2.8	37	2.3	15.6	41.0	19.9
0-57-2905	27.4	6	-3.1	2.2	36	2.4	14.9	42.1	19.2
0-57-2909	28.1	5	-2.1	2.5	36	2.4	15.1	40.4	19.4

[1]Days earlier (-) or later (+) than Grant which matured September 28, 123 days after planting. Flambeau (Group 00) matured -7.0.

Table 13. Disease data for Uniform Test 0, 1962.

Strain	Bacterial Blight		Bacterial Pustule		Brown Stem Rot	Phytophthora Rot
	Ill.	Ia.	Ill.	Ia.	Ill.	Ind.
	a[1]	a	a	a	n[1]	a
Grant	3	4	3	3	3	
Merit	2	3	4	3	3	
Norchief	2	3	3	3	3	
0-4323	3	3	3	3	3	
0-56-2678	2	3	3	3	3	S
0-57-2826	2	3	3	3	3	S
0-57-2905	2	3	4	4	4	S
0-57-2909	2	3	3	3	4	S

[1]a = artificial inoculation; n = natural infection.

Table 14. Yield, yield rank, and maturity, days earlier (-) or later (+) than Grant, for Uniform Test 0, 1962.

Strain	Mean of 9 Tests	Ottawa Ont.[1]	Guelph Ont.	Ridgetown Ont.	Columbus Ohio	East Lansing Mich.	Spooner Wis.[1]	Durand Wis.
								*
Grant	28.5	32.4	19.2	46.5	26.3	34.2	38.5	13.4
Merit	26.3	30.7	17.8	40.5	21.0	29.7	34.5	12.2
Norchief	24.7	32.1	18.8	35.6	17.4	25.0	34.2	13.4
0-4323	29.0	41.4	22.0	45.1	29.4	33.7	34.9	10.6
0-56-2678	28.5	35.5	19.1	50.4	29.7	29.8	37.1	13.0
0-57-2826	30.3	35.6	21.6	50.8	33.3	34.3	37.5	14.4
0-57-2905	27.4	33.3	21.6	41.7	28.2	32.2	33.7	13.7
0-57-2909	28.1	41.2	19.5	43.9	28.9	29.8	35.9	11.3
Coef. of Var. (%)		15.7	7.5	7.4	10.1	6.2	8.0	8.4
L.S.D. (5%)		NS	3.4	6.9	4.0	2.8	NS	1.6
Row Spacing (In.)		30	27	24	28	24	36	36
				Yield Rank				
								*
Grant	3	6	5	3	6	2	1	3
Merit	7	8	8	7	7	7	6	6
Norchief	8	7	7	8	8	8	7	3
0-4323	2	1	1	4	3	3	5	8
0-56-2678	3	4	6	2	2	5	3	5
0-57-2826	1	3	2	1	1	1	2	1
0-57-2905	6	5	2	6	5	4	8	2
0-57-2909	5	2	4	5	4	5	4	7
	Mean of 7 Tests			Maturity				
					*			*
Grant	0		0	0	0	0	0	0
Merit	-3.6		- 4	-5	-5	-1	-2	-2
Norchief	-3.0		- 6	-5	-7	0	-2	-1
0-4323	-5.1		- 6	-4	-3	-1	-2	-7
0-56-2678	-1.6		- 6	-1	-2	0	+2	-3
0-57-2826	+0.1		- 4	-1	-1	+1	+2	+2
0-57-2905	-3.1		- 6	-3	-5	0	0	-5
0-57-2909	-2.1		- 7	-1	-1	-1	0	-2
Flambeau	-7.0		-13	-5	--	0	-7	--
Date planted	5-28	5-17	5-25	5-23	5-10	5-28	5-29	5-26
Grant matured	9-28	--	10-4	9-22	8-25	9-25	9-26	9-12
Days to mature	123	--	132	122	107	120	120	109

*Not included in the mean.
[1]Irrigated.

Table 14. (Continued)

Strain	Crookston Minn.	Morris Minn.	Eureka S.D.	Watertown S.D.	Othello Wash.[1]	Prosser Wash.[1]	Ontario Ore.[1]	Medford Ore.[1]
				*	*	*	*	*
Grant	15.8	30.0	13.9	12.2	51.3	36.9	59.4	26.7
Merit	17.4	27.0	18.1	13.2	44.2	46.1	68.2	30.6
Norchief	13.0	28.6	17.6	13.9	42.6	25.5	50.6	29.5
0-4323	15.4	26.0	12.7	8.5	45.3	40.7	52.3	38.5
0-56-2678	11.8	27.0	16.0	13.5	47.4	24.3	54.5	29.6
0-57-2826	14.0	29.8	15.8	12.3	50.5	36.9	55.6	34.2
0-57-2905	13.6	26.8	15.8	12.0	46.7	31.5	53.0	31.8
0-57-2909	11.9	27.2	14.4	10.8	43.8	38.5	49.8	39.3
Coef. of Var. (%)	7.4	5.1	--	--	13.1	23.1	8.1	10.7
L.S.D. (5%)	3.1	4.2	--	--	8.6	12.5	6.7	5.1
Row Spacing (In.)	24	40	42	42	22	22	20	24
	Yield Rank							
				*	*	*	*	*
Grant	2	1	7	5	1	4	2	8
Merit	1	5	1	3	6	1	1	5
Norchief	6	3	2	1	8	7	7	7
0-4323	3	8	8	8	5	2	6	2
0-56-2678	8	5	3	2	3	8	4	6
0-57-2826	4	2	4	4	2	4	3	3
0-57-2905	5	7	4	6	4	6	5	4
0-57-2909	7	4	6	7	7	3	8	1
	Maturity							
				*	*	*	*	*
Grant	0	0	0	0	0	0	0	0
Merit	- 4	- 6	-3	-3	-4	- 3	- 4	- 2
Norchief	- 2	- 2	-4	-3	-2	- 4	- 5	- 1
0-4323	-10	-10	-3	-4	-5	- 5	-16	- 3
0-56-2678	- 1	- 3	-2	-3	+3	+ 8	- 3	+ 1
0-57-2826	+ 3	0	0	-2	+7	+12	+ 2	- 2
0-57-2905	- 4	- 6	-3	-3	+2	+ 8	- 8	0
0-57-2909	- 1	- 2	-3	-4	-3	- 2	- 3	0
Flambeau	-10	-10	-4	-4	-1	+ 1	-14	-10
Date planted	5-29	6-7	5-21	6-2	5-17	5-14	5-8	5-3
Grant matured	9-26	9-28	10-5	9-29	10-10	10-10	9-21	9-26
Days to mature	120	113	137	119	146	149	136	146

Table 15. Lodging, plant height, and seed quality for Uniform Test 0, 1962.

Strain	Mean of 6 Tests	Ottawa Ont.[1]	Guelph Ont.	Ridgetown Ont.	Columbus Ohio	East Lansing Mich.	Spooner Wis.[1]	Durand Wis.
					*			*
Grant	2.9	3.0	2.3	2.0	1.0	3.0	3.0	1.0
Merit	2.4	4.0	1.0	2.0	1.0	2.0	2.5	1.0
Norchief	2.4	3.0	1.0	2.0	1.0	2.0	3.4	1.0
0-4323	2.2	2.0	1.0	1.0	1.0	2.0	3.6	1.0
0-56-2678	2.4	3.0	1.0	1.0	1.0	3.0	3.5	1.0
0-57-2826	2.8	4.0	1.3	2.0	1.0	3.0	3.7	1.0
0-57-2905	2.2	2.0	1.0	2.0	1.0	2.0	3.6	1.0
0-57-2909	2.5	3.0	1.3	2.0	1.0	2.0	3.9	1.0
	Mean of 9 Tests	Plant Height						
								*
Grant	31	36	31	35	28	32	32	24
Merit	31	38	34	35	28	32	31	25
Norchief	29	34	31	31	24	30	29	23
0-4323	33	40	35	38	28	37	36	27
0-56-2678	36	40	38	40	33	39	40	30
0-57-2826	37	40	36	37	49	38	37	27
0-57-2905	36	42	36	39	32	39	38	28
0-57-2909	36	42	36	38	31	36	39	29
	Mean of 7 Tests	Seed Quality						
						*		*
Grant	2.1	2.0	2.8	2.0	2.0	2.0	1.0	3.0
Merit	1.9	2.0	2.5	1.0	2.0	2.0	1.5	4.0
Norchief	2.4	3.0	3.0	2.0	2.5	2.0	1.0	2.0
0-4323	2.8	3.0	3.0	3.0	2.5	2.0	1.5	4.0
0-56-2678	2.4	2.0	3.0	2.0	2.0	2.0	1.7	4.0
0-57-2826	2.3	2.0	2.3	2.0	2.5	2.0	1.6	3.0
0-57-2905	2.4	2.0	2.8	2.0	2.2	2.0	1.5	3.0
0-57-2909	2.4	3.0	2.8	2.0	2.5	2.0	1.0	5.0

*Not included in the mean.
[1]Irrigated.

Table 15. (Continued)

Strain	Crookston Minn.	Morris Minn.	Eureka S.D.	Watertown S.D.	Othello Wash.[1]	Prosser Wash.[1]	Ontario Ore.[1]	Medford Ore.[1]
			*	*	*	*	*	*
Grant		4.0	1.0	2.0	4.0	5.0	5.0	4.0
Merit		2.8	1.0	2.0	3.0	3.0	3.0	4.0
Norchief		3.0	1.0	2.0	3.0	5.0	4.0	4.0
0-4323		3.3	1.0	2.0	2.0	5.0	3.0	3.0
0-56-2678		2.8	1.0	2.0	4.0	5.0	3.5	4.0
0-57-2826		3.0	1.0	2.0	4.0	4.0	3.8	4.0
0-57-2905		2.5	1.0	2.0	4.0	4.0	3.5	4.0
0-57-2909		3.0	1.0	3.0	4.0	5.0	4.0	4.0
				Plant Height				
				*	*	*	*	*
Grant	27	31	25	23	43	63	45	59
Merit	25	32	26	24	43	69	45	58
Norchief	25	32	25	23	39	61	38	51
0-4323	28	33	23	22	52	70	48	54
0-56-2678	31	35	30	27	60	66	48	66
0-57-2826	30	35	30	26	50	62	50	65
0-57-2905	31	37	30	25	59	70	48	59
0-57-2909	30	38	30	26	51	62	50	53
				Seed Quality				
			*	*			*	*
Grant	2.3	2.5	1.0	2.0			2.0	3.0
Merit	2.3	2.3	1.0	1.0			1.5	3.0
Norchief	2.5	2.5	1.0	2.0			2.0	3.0
0-4323	3.3	3.0	1.0	2.0			2.5	3.0
0-56-2678	2.8	3.0	1.0	2.0			2.5	3.0
0-57-2826	3.0	3.0	1.0	2.0			2.5	3.0
0-57-2905	3.0	3.0	1.0	2.0			2.5	3.0
0-57-2909	3.3	2.5	1.0	1.0			2.5	3.0

Table 16. Percentages of protein and oil for Uniform Test 0, 1962.

Strain	Mean of 6 Tests	Ridge-town Ont.	Co-lum-bus Ohio	East Lan-sing Mich.	Spoon-er Wis.[1]	Morris Minn.	Eu-reka S.D.	Othel-lo Wash.[1]	On-tario Ore.[1]
								*	*
Grant	40.5	42.8	42.3	42.4	38.8	39.2	37.3	42.5	43.5
Merit	40.4	41.1	41.1	42.6	39.8	39.5	38.0	42.6	40.9
Norchief	41.4	43.1	42.3	43.8	40.2	40.6	38.2	45.9	44.1
0-4323	42.4	43.9	42.8	44.3	42.2	42.5	38.8	44.6	44.2
0-56-2678	41.8	44.1	43.5	44.3	41.0	40.9	37.1	44.9	44.0
0-57-2826	41.0	42.7	42.8	42.4	40.1	39.4	38.4	44.0	42.7
0-57-2905	42.1	43.7	44.6	44.2	41.8	41.4	36.9	44.1	44.3
0-57-2909	40.4	41.6	42.4	42.0	39.6	40.1	36.9	43.4	42.8
	Mean of 6 Tests	Percentage of Oil							
								*	*
Grant	19.8	20.0	20.2	19.5	18.5	20.0	20.6	16.0	17.6
Merit	20.3	20.7	21.0	20.0	18.0	20.7	21.5	16.4	20.0
Norchief	19.9	19.6	20.7	20.1	18.2	20.1	20.5	16.5	17.5
0-4323	19.8	19.5	20.7	19.6	17.3	20.5	21.1	16.2	18.8
0-56-2678	19.3	19.1	20.3	19.2	17.3	19.2	20.6	16.4	19.0
0-57-2826	19.9	20.1	21.1	20.6	17.4	20.7	19.6	16.1	18.1
0-57-2905	19.2	18.9	19.7	18.8	17.3	19.7	20.7	16.0	17.9
0-57-2909	19.4	20.1	21.5	20.1	17.0	18.6	21.0	16.2	18.7

*Not included in the mean.
[1]Irrigated.

UNIFORM PRELIMINARY TEST 0 - 1962

Strain	Originating Agency	Origin	Generation Composited
Grant	Wis. A.E.S. & U.S.R.S.L.	Lincoln x Seneca	F_6
Norchief	Wis. A.E.S. & U.S.R.S.L.	Hawkeye x Flambeau	F_4
M316G	Minn. A.E.S. & U.S.R.S.L.	Hawkeye x Capital	F_{12}
M389	Minn. A.E.S. & U.S.R.S.L.	Capital x M10	F_5
M391	Minn. A.E.S. & U.S.R.S.L.	Capital x Renville	F_5
0-57-2824	Central Exp. Farm, Ottawa, Ont.	Adams x A3K-884	F_{11}

Identification of Parent Strains

A3K-884	Sel. from Mukden x Richland, progenitor of Blackhawk.
M10	Sel. from Lincoln (2) x Richland.

Data were reported from nine locations in 1962 for the two check varieties and four experimental strains in this test. Three of the four strains were new entries in regional testing. M316 was in Preliminary Test 0 in 1957 and Uniform Test 0 in 1958 and 1959 but was segregating for pubescence color. M316G is a composite of gray pubescent lines from M316.

Grant had the highest average yield in the test but the early strain, M389, outyielded the early check, Norchief, and had good height and excellent lodging resistance. M391 includes two hilum colors, yellow and brown.

Table 17. Summary of data for Uniform Preliminary Test 0, 1962.

Strain	Yield	Rank	Maturity[1]	Lodging	Height	Seed Quality	Seed Weight	Seed Composition	
								Protein	Oil
No. of Tests	5	5	4	2	5	4	4	4	4
Grant	35.7	1	0	2.5	32	2.0	17.1	40.3	19.7
Norchief	28.2	6	-4.0	3.4	30	2.0	17.3	41.4	19.3
M316G	34.3	3	-2.8	3.0	33	1.8	16.0	40.1	20.6
M389	31.6	5	-3.5	1.5	32	2.0	16.6	40.8	20.2
M391	33.4	4	-1.5	3.4	35	2.4	18.0	40.4	20.8
0-57-2824	34.9	2	+1.0	3.5	35	1.3	18.0	40.8	20.0

[1]Days earlier (-) or later (+) than Grant which matured September 27, 125 days after planting. Flambeau (Group 00) matured -4.3.

Table 18. Disease data for Uniform Preliminary Test 0, 1962.

Strain	Bacterial Blight	Bacterial Pustule	Brown Stem Rot	Phytophthora Rot
	Ill. a[1]	Ill. a	Ill. n[1]	Ind. a
Grant	3	3	3	
Norchief	2	3	3	
M316G	4	4	3	
M389	2	4	3	S
M391	3	3	3	
0-57-2824	2	3	3	S

[1]a = artificial inoculation; n = natural infection.

Table 19. Yield, yield rank, and maturity, days earlier (-) or later (+) than Grant, for Uniform Preliminary Test 0, 1962.

Strain	Mean of 5 Tests	Ottawa Ont.	Ridgetown Ont.	East Lansing Mich.	Spooner Wis.[1]	Eureka S.D.	Watertown S.D. *	Othello Wash.[1] *	Prosser Wash.[1] *	Ontario Ore.[1] *
Grant	35.7	42.4	49.8	34.3	36.2	16.0	11.1	50.7	35.7	63.6
Norchief	28.2	29.2	36.4	24.8	34.1	16.3	13.0	41.2	20.9	49.6
M316G	34.3	40.7	44.5	32.6	37.3	16.6	12.2	40.4	34.9	56.4
M389	31.6	32.6	39.7	29.7	37.1	18.8	14.3	37.1	17.3	60.5
M391	33.4	39.7	42.8	29.6	39.5	15.3	14.3	48.5	60.1	58.3
0-57-2824	34.9	43.1	49.2	29.8	37.3	14.9	12.9	63.1	38.2	59.0
Coef. of Var. (%)		14.7	7.8	8.7	10.0	--	--	16.7	28.3	6.2
L.S.D. (5%)		NS	NS	NS	NS	--	--	NS	NS	NS
Row Spacing (In.)		30	24	24	36	42	42	22	22	20

	Yield Rank									
							*	*	*	*
Grant	1	2	1	1	5	4	6	2	3	1
Norchief	6	6	6	6	6	3	3	4	5	6
M316G	3	3	3	2	2	2	5	5	4	5
M389	5	5	5	4	4	1	1	6	6	2
M391	4	4	4	5	1	5	1	3	1	4
0-57-2824	2	1	2	3	2	6	4	1	2	3

	Mean of 4 Tests	Maturity								
		*					*	*	*	*
Grant	0		0	0	0	0	0	0	0	0
Norchief	-4.0		-5	-4	-3	-4	-4	-3	-7	-6
M316G	-2.8		-3	-4	0	-4	-2	+3	+1	-4
M389	-3.5		-4	-4	-2	-4	-3	+3	+2	-4
M391	-1.5		-1	-1	-1	-3	-3	+5	+6	-4
0-57-2824	+1.0		+1	-1	+4	0	-2	+4	+4	-1
Flambeau	-4.3		-7	+1	-7	-4	-4	-1	+1	-14
Date planted	5-25	5-17	5-23	5-28	5-29	5-21	6-2	5-17	5-14	5-8
Grant matured	9-27	--	9-24	9-24	9-26	10-5	9-29	10-10	10-10	9-21
Days to mature	125	--	124	119	120	133	119	146	149	136

*Not included in the mean.
[1]Irrigated.

UNIFORM TEST I - 1962

Strain	Originating Agency	Origin	Generation Composited
A-100	Freedolph Anderson, St. Peter, Minn.	Unknown	
Blackhawk	Iowa A.E.S. & U.S.R.S.L.	Mukden x Richland	F_7
Chippewa	Ill. A.E.S. & U.S.R.S.L.	Lincoln (2) x Richland	F_5
L1	Ill. A.E.S. & U.S.R.S.L.	Chippewa (8) x Blackhawk	F_1
Ottawa	Edward Brodbeck, Ottawa Lake, Mich.	Sel. from Chippewa	
A8-1334	Iowa A.E.S. & U.S.R.S.L.	Hawkeye x Capital	F_6
C1255	Purdue A.E.S. & U.S.R.S.L.	Harosoy x Clark	F_6
M380	Minn. A.E.S. & U.S.R.S.L.	M10 x PI 180501	F_5
W7-2334	Wis. A.E.S. & U.S.R.S.L.	Seneca x Chippewa	F_5

Identification of Parent Strains

M10	Sel. from Lincoln (2) x Richland.
PI 180501	Sel. made in Germany from Strain 238 (of Manchurian origin) x PI 54616 (yellow soybean from Kungchuling, Chekiang Province, China, introduced to U. S. through B. W. Skvortzow, Harbin, Manchuria).

Data were reported from 21 locations in 1962 for the four varieties and five experimental strains in this test.

One strain, M380, has been in the test for two years. It is slightly earlier than Blackhawk but has outyielded Blackhawk and Chippewa both years, although the margin over Chippewa this year decreased to one bushel.

Two farmers' selections, A-100 and Ottawa, were entered in regional tests for the first time. A-100 was also entered in Uniform Test II. Both varieties performed well in this test. A-100 outyielded the check varieties but Ottawa does not appear to have any advantage over Chippewa in agronomic performance.

L1 was derived by backcrossing to Chippewa and selecting for Phytophthora resistance. L1 did fully as well in yield as Chippewa and equalled it in other traits on the average. This strain was increased in Illinois, Indiana, Iowa, Ohio, and South Dakota for possible future release.

The remaining three strains were entered from the 1961 Preliminary Test I. A8-1334 and C1255 topped the test in mean yield and were about two days earlier than Blackhawk and five days later than Chippewa.

Table 20. Summary of data for Uniform Test I, 1962.

Strain	Yield	Rank	Maturity[1]	Lodging	Height	Seed Quality	Seed Weight	Seed Composition	
								Protein	Oil
No. of Tests	16	16	13	14	16	12	15	9	9
A-100	34.6	3	+7.3	1.9	34	1.6	17.7	40.7	21.2
Blackhawk	30.5	9	+8.2	2.2	35	1.7	16.1	41.5	20.0
Chippewa	32.1	7	0	2.0	34	1.7	14.7	41.8	20.1
L1	32.5	6	+0.1	1.7	36	1.6	15.3	41.7	20.0
Ottawa	31.6	8	+2.8	2.2	36	1.7	17.5	42.0	19.6
A8-1334	35.1	2	+5.6	2.0	36	1.8	16.0	42.6	20.0
C1255	35.7	1	+5.3	2.3	36	2.1	17.8	42.0	20.5
M380	33.1	5	+6.5	1.9	34	1.6	17.2	42.1	20.0
W7-2334	33.4	4	+6.6	1.8	36	1.5	15.7	40.1	20.2

[1]Days earlier (-) or later (+) than Chippewa which matured September 18, 117 days after planting. Grant (Group 0) matured -2.2.

Table 21. Disease data for Uniform Test I, 1962.

Strain	Bacterial Blight		Bacterial Pustule		Brown Stem Rot	Phytophthora Rot	Pod & Stem Blight	Downy Mildew		Frogeye Ind.		Purple Stain	
	Ill.	Ia.	Ill.	Ia.	Ill.	Ind.	Del.	Ind.	Del.	R1	R2[2]	Ind.	Del.
	a[1]	a	a	a	n[1]	a	n	n	n	a	a	n	n
A-100	3	3	4	2	4	S	3.2	4.0	3.9	--	S		3.8
Blackhawk	2	3	3	3	4	R	3.0	5.0	4.0	S	S		2.8
Chippewa	2	3	4	3	4	S	2.5	3.0	4.2	S	S		3.0
L1	3	3	4	3	4	R	3.5	2.8	4.4	S	S		2.0
Ottawa	2	4	3	3	4	R	2.0	2.3	3.5	--	S		2.5
A8-1334	1	4	4	3	4	S	2.2	4.0	3.0	--	S		3.0
C1255	2	4	3	3	4	S	3.0	2.3	3.4	R	S		2.3
M380	3	4	4	2	4	S	4.5	2.5	3.5	Seg.	S		2.5
W7-2334	3	3	4	3	4	S	3.8	1.5	4.0	S	S		3.5

[1]a = artificial inoculation; n = natural infection.
[2]R1 = Race 1; R2 = Race 2.

Table 22. Yield and yield rank for Uniform Test I, 1962.

Strain	Mean of 16 Tests	Ridge-town Ont.	Hoyt-ville Ohio	Woos-ter Ohio	Co-lum-bus Ohio	East Lan-sing Mich.	Ida Mich.	Walk-er-ton Ind.	Lafa-yette Ind.	Durand Wis. *	Madi-son Wis.
A-100	34.6	45.8	31.6	19.7	36.9	30.4	33.7	40.7	44.6	14.9	38.9
Blackhawk	30.5	36.2	26.6	18.1	31.8	28.3	28.5	35.9	39.7	13.5	31.3
Chippewa	32.1	41.5	29.0	19.9	33.1	28.7	29.5	34.8	38.9	11.1	35.0
L1	32.5	44.3	29.6	20.9	33.7	27.7	28.8	36.1	39.2	11.8	35.8
Ottawa	31.6	44.7	28.4	19.7	33.8	27.9	27.6	36.1	36.4	12.3	31.9
A8-1334	35.1	42.3	27.0	19.4	32.3	29.8	33.5	38.7	40.5	16.4	36.7
C1255	35.7	49.9	29.1	19.8	34.1	30.9	34.3	44.3	43.6	16.2	39.1
M380	33.1	40.9	27.4	20.4	30.6	30.4	28.7	38.0	42.0	12.3	36.8
W7-2334	33.4	43.0	27.0	20.0	30.8	28.2	31.6	38.6	40.2	15.0	39.0
Coef. of Var.(%)		8.1	8.5	10.5	10.0	6.4	9.5	7.3	7.8	7.0	5.9
L.S.D.(5%)		7.2	NS	NS	NS	NS	4.3	4.1	4.6	1.4	3.0
Row Spacing(In.)		24	36	28	28	24	34	40	38	36	36

	Yield Rank										
										*	
A-100	3	2	1	6	1	2	2	2	1	4	3
Blackhawk	9	9	9	9	7	6	8	8	6	5	9
Chippewa	7	7	4	4	5	5	5	9	8	9	7
L1	6	4	2	1	4	9	6	6	7	8	6
Ottawa	8	3	5	6	3	8	9	6	9	6	8
A8-1334	2	6	7	8	6	4	3	3	4	1	5
C1255	1	1	3	5	2	1	1	1	2	2	1
M380	5	8	6	2	9	2	7	5	3	6	4
W7-2334	4	5	7	3	8	7	4	4	5	3	2

*Not included in the mean.
[1]Irrigated.

Table 22. (Continued)

Strain	Shab-bona Ill.	Dwight Ill.	Ur-bana Ill.	Wa-seca Minn.	Kana-wha Iowa	Eu-reka S.D.	Water-town S.D. *	Brook-ings S.D.	Othello Wash.[1] *	Pros-ser Wash.[1] *	On-tario Ore.[1] *
A-100	32.0	34.1	49.9	29.9	35.2	19.5	11.9	30.3	28.9	17.2	48.0
Blackhawk	27.0	30.6	43.2	24.9	38.8	19.6	13.9	27.4	28.2	16.8	39.1
Chippewa	30.1	30.2	45.0	30.2	36.5	18.5	13.7	33.3	32.8	31.7	51.8
L1	31.4	30.2	40.8	32.3	36.0	19.5	13.3	33.0	39.9	36.8	51.8
Ottawa	32.6	29.8	42.8	28.3	35.5	20.6	13.0	29.1	37.7	25.5	45.6
A8-1334	37.7	31.5	56.1	31.7	42.7	28.3	15.6	32.9	27.1	16.9	49.0
C1255	37.9	34.0	51.8	29.8	39.8	21.0	15.7	32.2	33.7	33.9	56.8
M380	31.4	32.7	47.5	27.5	43.2	20.8	12.7	31.0	32.0	35.1	49.1
W7-2334	39.0	33.2	43.7	28.6	42.9	17.7	12.3	30.6	36.7	34.1	57.9
C.V.(%)	8.7	8.0	9.4	3.8	4.2	--	--	--	13.2	31.1	11.0
L.S.D.(5%)	4.2	NS	6.4	3.2	2.3	--	--	--	8.6	12.5	8.0
Row Sp.(In.)	40	40	40	40	40	42	42	42	22	22	20

	Yield Rank										
							*		*	*	*
A-100	5	1	3	4	9	6	9	7	7	9	7
Blackhawk	9	6	7	9	5	5	3	9	8	8	9
Chippewa	8	7	5	3	6	8	4	1	5	5	3
L1	6	7	9	1	7	6	5	2	1	1	3
Ottawa	4	9	8	7	8	4	6	8	2	6	8
A8-1334	3	5	1	2	3	1	2	3	9	7	6
C1255	2	2	2	5	4	2	1	4	4	4	2
M380	6	4	4	8	1	3	7	5	6	2	5
W7-2334	1	3	6	6	2	9	8	6	3	3	1

Table 23. Maturity, days earlier (-) or later (+) than Chippewa, and lodging for Uniform Test I, 1962.

Strain	Mean of 13 Tests	Ridge-town Ont.	Hoyt-ville Ohio *	Woos-ter Ohio *	Co-lum-bus Ohio	East Lan-sing Mich.	Ida Mich.	Walk-er-ton Ind.	Lafa-yette Ind. *	Durand Wis. *	Madi-son Wis.
A-100	+7.3	+4	+ 5	+8	+14	+4	+3	+12	+8	+10	+ 4
Blackhawk	+8.2	+6	+13	+9	+16	+6	+3	+10	+7	+11	+10
Chippewa	0	0	0	0	0	0	0	0	0	0	0
L1	+0.1	0	+ 2	-1	0	0	0	+ 1	0	0	0
Ottawa	+2.8	+2	+ 4	+4	+ 9	+4	+2	+ 2	+4	+ 3	+ 3
A8-1334	+5.6	+3	+ 8	+5	+14	+2	+3	+ 5	+2	+10	+ 4
C1255	+5.3	+2	+ 6	+7	+13	+4	+4	+ 5	+2	+14	+ 5
M380	+6.5	+2	+ 7	+6	+13	+2	+3	+10	+4	+ 2	+ 7
W7-2334	+6.6	+2	+12	+9	+13	+4	+5	+11	+3	+ 7	+ 8
Grant	-2.2	-4	--	--	+ 1	0	0	- 2	--	- 9	- 3
Date planted	5-24	5-23	5-18	5-21	5-10	5-28	5-26	6-1	5-18	5-26	5-16
Chippewa matured	9-18	9-29	9-1	9-3	8-24	10-8	9-20	9-12	8-28	9-21	9-12
Days to mature	117	129	106	105	106	133	117	103	102	118	119
	Mean of 14 Tests	Lodging									
A-100	1.9	2.0	1.2	1.0 *	1.2	2.0	3.0	1.5	1.0	1.0 *	2.6
Blackhawk	2.2	3.0	1.5	1.0	1.0	2.0	3.0	1.3	1.0	1.0	3.8
Chippewa	2.0	2.0	2.0	1.0	1.0	1.0	3.0	2.0	1.3	1.0	2.3
L1	1.7	2.0	1.2	1.0	1.0	1.0	2.0	1.5	1.0	1.0	2.4
Ottawa	2.2	2.0	2.2	1.0	1.5	2.0	3.0	1.8	1.3	1.0	3.5
A8-1334	2.0	3.0	2.0	1.0	1.0	1.0	3.0	1.3	1.3	1.0	2.6
C1255	2.3	3.0	2.2	1.0	1.2	2.0	4.0	1.5	1.8	1.0	3.0
M380	1.9	2.0	1.5	1.0	1.2	2.0	3.0	1.8	1.5	1.0	2.4
W7-2334	1.8	2.0	1.5	1.0	1.5	2.0	3.0	1.3	1.0	1.0	2.4

*Not included in the mean.
[1]Irrigated.

Table 23. (Continued)

Strain	Shabbona Ill.	Dwight Ill.	Urbana Ill.	Waseca Minn.	Kanawha Iowa	Eureka S.D.	Watertown S.D.*	Brookings S.D.	Othello Wash.[1]*	Prosser Wash.[1]*	Ontario Ore.[1]*
A-100	+5	+5	+4	+12	+ 9	+11	+1	+8	+5	+7	+14
Blackhawk	+5	+5	+4	+14	+10	+10	+2	+7	+2	+5	+16
Chippewa	0	0	0	0	0	0	0	0	0	0	0
L1	0	-1	0	+ 2	0	0	0	-1	-4	-3	+ 1
Ottawa	+1	+1	-1	+ 3	+ 2	+ 3	0	+6	-3	+4	+ 6
A8-1334	+5	+5	+3	+10	+10	+ 5	+1	+4	+1	-6	+14
C1255	+7	+2	+4	+ 8	+ 6	+ 4	+2	+5	+3	+4	+ 9
M380	+4	+5	+5	+13	+10	+ 3	+2	+8	-2	+2	+12
W7-2334	+6	+5	+5	+ 7	+ 8	+ 5	+2	+7	-3	+7	+10
Grant	-3	-6	-3	- 3	- 3	0	-1	-2	-3	-3	- 4
Date planted	5-23	6-2	5-15	6-2	5-22	5-21	6-2	5-31	5-17	5-14	5-8
Chippewa mat.	9-12	9-13	8-29	9-30	9-14	10-7	10-3	10-1	10-17	10-15	9-25
Days to mat.	112	103	106	120	115	139	123	123	153	154	140
	Lodging										
						*	*		*	*	*
A-100	2.3	1.6	2.1	2.0	2.6	1.0	2.0	1.0	5.0	5.0	3.8
Blackhawk	2.4	2.0	2.1	3.0	2.7	1.0	2.0	1.5	5.0	5.0	5.0
Chippewa	2.7	1.5	1.9	2.0	3.2	1.0	2.0	1.5	5.0	5.0	3.5
L1	2.2	1.4	1.6	2.3	3.2	1.0	2.0	1.0	5.0	5.0	3.5
Ottawa	2.6	1.8	2.3	2.3	3.5	1.0	1.0	1.0	5.0	5.0	3.7
A8-1334	2.6	1.6	2.5	2.0	2.6	1.0	2.0	1.0	5.0	5.0	4.8
C1255	2.7	1.6	2.4	2.8	3.0	1.0	2.0	1.0	5.0	5.0	3.8
M380	2.2	1.5	1.7	2.5	2.4	1.0	2.0	1.0	5.0	5.0	2.8
W7-2334	1.9	1.3	1.4	2.3	2.3	1.0	1.0	1.0	5.0	5.0	2.8

Table 24. Plant height and seed quality for Uniform Test I, 1962.

Strain	Mean of 16 Tests	Ridge-town Ont.	Hoyt-ville Ohio	Woos-ter Ohio	Co-lum-bus Ohio	East Lan-sing Mich.	Ida Mich.	Walk-er-ton Ind.	Lafa-yette Ind.	Durand Wis.	Madi-son Wis.
										*	
A-100	34	37	34	20	31	30	32	33	38	24	36
Blackhawk	35	36	35	20	33	32	35	34	38	26	38
Chippewa	34	36	35	21	32	31	33	33	37	23	38
L1	36	41	36	22	33	31	34	33	39	23	38
Ottawa	36	41	35	22	33	32	34	33	38	27	43
A8-1334	36	40	37	19	33	31	36	35	40	24	39
C1255	36	40	35	20	35	31	35	35	38	26	37
M380	34	36	34	19	32	32	33	31	36	24	34
W7-2334	36	39	35	20	37	31	36	35	38	25	40
	Mean of 12 Tests	Seed Quality									
			*				*	*		*	
A-100	1.6	2.0	1.0	1.0	1.2	2.0	2.0	2.0	1.5	3.0	2.0
Blackhawk	1.7	2.0	1.0	1.2	1.2	1.0	2.0	2.0	1.5	2.0	2.0
Chippewa	1.7	2.0	1.0	1.0	1.5	2.0	2.0	2.0	1.5	3.0	2.0
L1	1.6	2.0	1.0	1.0	1.2	2.0	2.0	2.0	1.5	3.0	1.0
Ottawa	1.7	2.0	1.0	1.0	1.2	2.0	2.0	2.0	2.0	3.0	2.0
A8-1334	1.8	3.0	1.0	1.0	1.0	2.0	2.0	2.0	1.5	2.0	2.0
C1255	2.1	3.0	1.0	2.0	2.2	2.0	2.0	2.0	1.0	2.0	3.0
M380	1.6	2.0	1.0	1.0	1.0	2.0	2.0	2.0	1.5	2.0	2.0
W7-2334	1.5	3.0	1.0	1.0	1.2	1.0	2.0	2.0	1.0	2.0	1.0

*Not included in the mean.
[1]Irrigated.

Table 24. (Continued)

Strain	Shab-bona Ill.	Dwight Ill.	Ur-bana Ill.	Wa-seca Minn.	Kana-wha Iowa	Eu-reka S.D.	Water-town S.D.	Brook-ings S.D.	Othello Wash.[1]	Pros-ser Wash.[1]	On-tario Ore.[1]
							*		*	*	*
A-100	39	37	35	37	39	29	27	40	56	64	50
Blackhawk	38	38	34	37	40	33	28	42	61	64	55
Chippewa	37	37	35	33	39	29	25	38	55	55	40
L1	42	38	36	36	40	30	28	39	54	69	40
Ottawa	42	42	36	38	40	30	28	43	58	67	50
A8-1334	41	36	39	37	43	31	30	42	59	64	50
C1255	42	39	38	37	42	31	27	41	55	66	45
M380	38	37	34	36	38	27	26	39	47	54	40
W7-2334	41	38	37	36	45	30	28	42	50	65	48

	Seed Quality										
					*		*				*
A-100	1.6	2.0	1.9	2.0	1.0	1.0	2.0	1.0			1.5
Blackhawk	1.8	2.0	2.0	2.5	1.0	1.0	2.0	2.0			2.5
Chippewa	1.5	2.0	1.5	2.0	1.0	2.0	1.0	1.0			1.5
L1	1.3	1.8	1.8	2.0	1.0	2.0	2.0	1.0			1.5
Ottawa	1.5	2.5	1.6	2.5	1.0	1.0	2.0	1.0			2.0
A8-1334	1.8	2.5	1.4	2.5	1.0	1.0	1.0	2.0			3.0
C1255	1.8	2.0	1.5	3.0	1.0	2.0	2.0	2.0			3.0
M380	1.5	2.1	1.6	3.0	1.0	1.0	2.0	1.0			2.0
W7-2334	1.3	1.5	1.4	3.0	1.0	2.0	2.0	1.0			1.5

Table 25. Percentages of protein and oil for Uniform Test I, 1962.

Strain	Mean of 9 Tests	Ridge-town Ont.	Co-lum-bus Ohio	East Lan-sing Mich.	Walk-er-ton Ind.	Madi-son Wis.	Shab-bona Ill.	Wa-seca Minn.	Kana-wha Iowa	Brook-ings S.D.	Othel-lo Wash.[1] *	On-tario Ore.[1] *
A-100	40.7	40.4	42.1	43.5	41.0	40.9	40.2	40.3	39.9	37.6	43.7	40.1
Blackhawk	41.5	42.4	41.9	43.6	42.5	42.4	41.1	40.4	41.0	38.1	43.9	42.5
Chippewa	41.8	42.0	42.8	43.8	42.0	40.7	42.8	40.6	42.2	39.6	42.9	42.8
L1	41.7	41.6	41.6	44.5	42.3	41.6	42.5	40.5	41.7	39.2	45.0	43.6
Ottawa	42.0	42.1	43.2	45.4	42.2	42.2	41.4	40.8	41.1	39.2	45.9	44.0
A8-1334	42.6	43.6	43.0	45.0	42.0	43.0	42.2	42.7	42.1	39.7	46.4	44.5
C1255	42.0	41.4	42.4	44.1	43.0	42.0	42.3	41.4	42.0	39.2	43.7	43.5
M380	42.1	41.8	42.5	43.6	43.0	42.1	42.1	41.9	42.4	39.4	46.1	44.1
W7-2334	40.1	40.0	40.0	42.8	40.7	41.0	39.9	38.9	40.1	37.4	43.7	41.2

	Mean of 9 Tests	Percentage of Oil										
											*	*
A-100	21.2	20.6	22.0	20.6	21.4	21.4	22.0	21.2	20.3	21.2	16.8	19.1
Blackhawk	20.0	19.8	21.5	19.5	20.0	19.3	20.9	19.2	20.1	19.7	15.8	18.6
Chippewa	20.1	20.2	19.7	20.1	20.9	20.2	20.8	19.2	20.3	19.8	16.2	18.8
L1	20.0	20.1	20.5	18.8	20.8	20.4	20.7	18.6	20.0	19.8	16.5	17.4
Ottawa	19.6	19.4	19.9	18.3	19.9	19.0	21.1	18.8	19.8	19.8	15.6	17.9
A8-1334	20.0	18.9	21.0	19.4	20.8	20.3	21.3	18.5	19.9	20.0	15.7	18.2
C1255	20.5	21.0	21.7	20.0	21.0	20.1	21.4	19.2	20.4	20.1	16.9	18.1
M380	20.0	20.1	21.4	19.3	20.8	19.3	21.4	18.7	19.2	19.9	16.9	18.8
W7-2334	20.2	20.4	21.4	19.5	20.7	20.1	21.4	18.9	19.7	19.7	15.8	18.4

*Not included in the mean.
[1]Irrigated.

UNIFORM PRELIMINARY TEST I - 1962

Strain	Originating Agency	Origin	Generation Composited
Blackhawk	Iowa A.E.S. & U.S.R.S.L.	Mukden x Richland	F_7
Chippewa	Ill. A.E.S. & U.S.R.S.L.	Lincoln (2) x Richland	F_5
A9-619	Iowa A.E.S. & U.S.R.S.L.	Clark x Chippewa	F_4
AX157-9	Iowa A.E.S. & U.S.R.S.L.	Chippewa (3) x A6-8221	F_3
M402	Minn. A.E.S. & U.S.R.S.L.	Renville x Capital	F_5
W7-2155	Wis. A.E.S. & U.S.R.S.L.	Blackhawk x Seneca	F_5
W7-2330	Wis. A.E.S. & U.S.R.S.L.	Seneca x Chippewa	F_5

Identification of Parent Strain

A6-8221	D49-2491 (2) x Hawkeye. D49-2491 is an F_6 line from S100 x CNS.

Data were reported from 12 locations for the two check varieties and five new experimental strains in this test.

Only two strains, A9-619 and M402, had appreciably higher yields than the checks. M402 and W7-2155 were two days later than Blackhawk and would therefore be considered maturity Group II.

Table 26. Summary of data for Uniform Preliminary Test I, 1962.

Strain	Yield	Rank	Maturity[1]	Lodging	Height	Seed Quality	Seed Weight	Seed Composition	
								Protein	Oil
No. of Tests	9	9	7	7	9	7	8	6	6
Blackhawk	30.5	5	+ 9.0	2.3	35	1.5	15.7	41.2	20.0
Chippewa	30.5	5	0	1.9	34	1.6	14.1	42.0	20.0
A9-619	34.1	1	+ 4.7	1.9	35	1.4	15.7	41.7	20.5
AX157-9	29.0	7	+ 0.7	1.8	35	1.6	14.0	42.3	19.7
M402	32.3	2	+10.7	2.0	36	1.7	15.3	40.3	21.0
W7-2155	30.9	4	+11.1	2.0	37	1.6	14.6	41.0	19.0
W7-2330	31.0	3	+ 8.3	1.8	36	1.2	14.4	40.7	19.9

[1]Days earlier (-) or later (+) than Chippewa which matured September 22, 123 days after planting. Grant (Group 0) matured -1.7.

Table 27. Disease data for Uniform Preliminary Test I, 1962.

Strain	Bacterial Blight	Bacterial Pustule	Brown Stem Rot	Phytophthora Rot	Pod & Stem Blight	Downy Mildew		Frogeye Ind.		Purple Stain	
	Ill.	Ill.	Ill.	Ind.	Del.	Ind.	Del.	R1	R2[2]	Ind.	Del.
	a[1]	a	n[1]	a	n	n	n	a	a	n	n
Blackhawk	2	3	4		3.0	4.0	4.0			2	2.8
Chippewa	2	4	4		2.5	3.0	4.2			2	3.0
A9-619	2	4	4		3.0		4.2				2.0
AX157-9	3	4	4	S	2.5		4.0		S		1.0
M402	3	3	4		3.0		4.2				2.0
W7-2155	2	3	4	R	2.0		2.0				2.0
W7-2330	4	4	4		3.0		3.7				2.0

[1]a = artificial inoculation; n = natural infection.
[2]R1 = Race 1; R2 = Race 2.

Table 28. Yield, yield rank, and maturity, days earlier (-) or later (+) than Chippewa, for Uniform Preliminary Test I, 1962.

Strain	Mean of 9 Tests	Ridge-town Ont.	Hoyt-ville Ohio	Woos-ter Ohio	Co-lum-bus Ohio	East Lan-sing Mich.	Madi-son Wis.	Kana-wha Iowa	Eu-reka S.D.	Water-town S.D.	Brook-ings S.D.	Othel-lo Wash.[1]	On-tario Ore.[1]
										*		*	*
Blackhawk	30.5	40.5	22.9	21.3	29.2	31.5	33.8	37.6	26.4	11.3	30.9	35.9	35.9
Chippewa	30.5	40.0	23.0	22.9	33.0	32.0	32.3	35.8	22.0	11.9	33.9	33.9	55.6
A9-619	34.1	46.0	27.2	21.3	36.1	34.5	41.2	42.4	24.1	12.1	34.5	31.6	52.3
AX157-9	29.0	39.3	21.5	20.5	29.4	28.0	30.9	33.0	22.7	13.3	35.4	20.6	50.1
M402	32.3	46.9	21.4	23.2	32.7	31.5	35.4	44.8	23.6	11.0	31.5	48.3	57.4
W7-2155	30.9	44.5	21.3	23.0	29.8	30.3	35.9	38.8	19.9	9.3	34.3	26.3	50.4
W7-2330	31.0	38.5	24.2	19.1	31.4	29.1	34.2	41.4	25.7	10.8	35.2	42.4	44.9
C.V.(%)		10.2	18.0	7.9	16.8	4.5	5.0	5.1	--	--	--	18.2	3.9
L.S.D.(5%)		NS	NS	NS	NS	NS	4.3	4.9	--	--	--	15.3	4.7
Row Sp.(In.)		24	36	28	28	24	36	40	42	42	42	22	20
		Yield Rank											
										*		*	*
Blackhawk	5	4	4	4	7	3	5	5	1	4	7	3	7
Chippewa	5	5	3	3	2	2	6	6	6	3	5	4	2
A9-619	1	2	1	4	1	1	1	2	3	2	3	5	3
AX157-9	7	6	5	6	6	7	7	7	5	1	1	7	5
M402	2	1	6	1	3	3	3	1	4	5	6	1	1
W7-2155	4	3	7	2	5	5	2	4	7	7	4	6	4
W7-2330	3	7	2	7	4	6	4	3	2	6	2	2	6
	Mean of 7 Tests	Maturity											
			*	*						*		*	*
Blackhawk	+ 9.0	+6	+14	+7	+14	+6	+10	+12	+ 7	+5	+8	+3	+16
Chippewa	0	0	0	0	0	0	0	0	0	0	0	0	0
A9-619	+ 4.7	+2	+ 9	-1	+ 5	+2	+ 4	+10	+ 4	+2	+6	+1	+ 9
AX157-9	+ 0.7	-2	+ 4	0	+ 1	+2	+ 2	+ 1	+ 1	0	0	+2	- 1
M402	+10.7	+7	+ 9	+9	+23	+6	+ 8	+12	+11	+5	+8	+1	+10
W7-2155	+11.1	+6	+15	+8	+20	+6	+10	+14	+13	+6	+9	+4	+12
W7-2330	+ 8.3	+6	+12	+8	+18	+4	+ 7	+12	+ 5	+1	+6	-2	+14
Grant	- 1.7	-4	--	--	0	0	- 3	- 3	0	-1	-2	-3	- 4
Date planted	5-22	5-23	5-18	5-21	5-10	5-28	5-16	5-22	5-21	6-2	5-31	5-17	5-8
Chippewa mat.	9-22	9-29	8-31	9-3	8-25	10-8	9-12	9-14	10-7	10-3	10-1	10-17	9-25
Days to mat.	123	129	105	105	107	133	119	115	139	123	123	153	140

*Not included in the mean.
[1]Irrigated.

UNIFORM TEST II - 1962

Strain	Originating Agency	Origin	Generation Composited
A-100	Freedolph Anderson, St. Peter, Minn.	Unknown	
Adams	Iowa A.E.S. & U.S.R.S.L.	Illini x Dunfield	F_7
L59g-3R	Ill. A.E.S. & U.S.R.S.L.	Adams (6) x F_2 (Blackhawk x Adams)	F_1
Harosoy	Research Station, Harrow, Ont.	Mandarin (2) x A.K.	F_5
L2	Ill. A.E.S. & U.S.R.S.L.	Harosoy 63 x L3	F_1
L3	Ill. A.E.S. & U.S.R.S.L.	Harosoy (5) x (S54-1207 x Harosoy)	F_1
Harosoy 63 (L59g-1R)	Ill. A.E.S. & U.S.R.S.L.	Harosoy (7) x F_2 (Blackhawk x Harosoy)	F_1
Hawkeye	Iowa A.E.S. & U.S.R.S.L.	Mukden x Richland	F_4
Hawkeye 63 (L59g-2R)	Ill. A.E.S. & U.S.R.S.L.	Hawkeye (6) x F_2 (Blackhawk x Hawkeye)	F_1
Lindarin	Purdue A.E.S. & U.S.R.S.L.	Mandarin (Ottawa) x Lincoln	F_7
Lindarin 63 (C1294R)	Purdue A.E.S. & U.S.R.S.L.	Lindarin (4) x (Mukden x Lindarin)	F_2
A5-5629	Iowa A.E.S. & U.S.R.S.L.	Roanoke x Hawkeye	F_5
A8-932	Iowa A.E.S. & U.S.R.S.L.	Harosoy x Capital	F_6
AX50F40-2	Iowa A.E.S. & U.S.R.S.L.	Hawkeye x Clark	F_5
AX50F58-2	Iowa A.E.S. & U.S.R.S.L.	Hawkeye x Clark	F_5
AX56P64-1	Iowa A.E.S. & U.S.R.S.L.	Adams x Harosoy	F_5
C1264	Purdue A.E.S. & U.S.R.S.L.	Harosoy x C1079	F_6
C1265	Purdue A.E.S. & U.S.R.S.L.	Harosoy x C1079	F_6
O-671	Research Station, Harrow, Ont.	Mandarin x (A.K. (Harrow) x Korean)	F_9

Identification of Parent Strains

C1079	F_7 line from Lincoln x Ogden; from same F_4 line as Kent.
S54-1207	Sel. from Hawkeye x (L49-4091 x L46-2132-1). L49-4091 is a pustule-resistant F_4 line from L44-1219 x (Lincoln x CNS). L44-1219 is an F_3 line from Lincoln (2) x Richland. L46-2132-1 is an F_8 line from Lincoln (2) x Richland and a sib of Clark and Shelby.

Data were reported from 29 locations in 1962 for the eight named varieties and eleven experimental strains in this test.

Three strains, including two newly-released varieties, produced by backcrossing have been in the test for three years and the three-year means are presented in Tables 41 and 42. L59g-3R, produced by backcrossing to Adams, will not be released because of the shift of commercial acreage from Adams to other varieties. Harosoy 63 and Hawkeye 63, produced by backcrossing to the indicated variety, have recently been

released. All three have similar means to their recurrent parent although yield is slightly lower in all three backcross strains. The 80 tests making up the three-year mean do not include tests where Phytophthora was known to have affected the means.

The newly-released Lindarin 63, along with four experimental strains, are included in the two-year means in Tables 39 and 40. Lindarin 63, like the other backcross strains, yielded slightly less than its recurrent parent but is otherwise similar. The four A strains have performed well in the two years with three out of the four having a higher mean yield than Harosoy. Two of them (the lower yielding two, unfortunately) have excellent lodging resistance, even excelling Hawkeye in this trait.

A-100, a farmer's selection, was entered in regional tests for the first time in 1962. It was quite early for Group II and yielded about as well as would be expected for its maturity. It was also entered in Uniform Test I.

Two strains of backcross origin, L2 and L3, are new entries in 1962. L3 is a pustule-resistant strain produced by backcrossing to Harosoy while L2 is both pustule- and Phytophthora-resistant from a cross of Harosoy 63 with L3. Both L2 and L3 performed as the other backcross strains in the absence of disease, averaging slightly lower in yield and similar in other traits. At Greenfield, Indiana, where Phytophthora occurred, L2 and the other PR-resistant strains outyielded the respective recurrent parent by from 7 to 18 bushels. L2 was increased in 1962 in Illinois, Indiana, Missouri, Ohio, Ontario, and South Dakota for possible future release.

The remaining four strains, A8-932, C1264, C1265, and O-671, were entered from last year's Preliminary Test I or II. A8-932, although early, had the highest mean yield in the test. The other three yielded about as expected, considering their respective maturities.

A description and outline of the history of the development of Harosoy 63, Hawkeye 63, and Lindarin 63 follows:

HAROSOY 63

Harosoy 63 was named and released in January 1963. Participants in the release are Illinois, Indiana, Michigan, Missouri, Ohio, South Dakota, and Wisconsin and Ontario. Harosoy 63, formerly L59g-1R, is similar to Harosoy in all respects except for the addition from Blackhawk of a dominant gene for Phytophthora rot resistance. Harosoy 63 was developed at Urbana by the backcross method with most of the work done in the greenhouse. The details of its development are given below:

1952			Cross of Blackhawk x Harosoy made at Ames, Iowa.
1953		F_1	Plants grown at Ames; seeds sent to Urbana in April 1956.
1956	Mar-Aug	F_2	Seedlings PR-inoculated; survivors (4 plants) crossed onto Harosoy.
1956-57	Oct-Mar	F_1BC_1	Seedlings PR-inoculated; survivors (10) crossed onto Harosoy.
1957	Apr-Jul	F_1BC_2	Seedlings PR-inoculated; survivors (6) crossed onto Harosoy.

1957	Jul-Oct	F_1BC_3	Seedlings PR-inoculated; survivors (5) crossed onto Harosoy.
1957-58	Oct-Feb	F_1BC_4	Seedlings PR-inoculated; survivors (1) crossed onto Harosoy.
			(In 1958 a bulk of 15 uniformly resistant F_3 lines from this BC_4 was composited as L58g-1R and increased in 1959. A bulk of segregating lines L58g-1H was entered in Uniform Test II in 1959. It averaged lower in yield, earlier, and shorter than Harosoy, and L58g-1R was therefore discarded.)
1958	Feb-May	F_1BC_5	Seedlings PR-inoculated; survivors (2) crossed onto Harosoy.
1958	Jun-Sep	F_1BC_6	Seedlings PR-inoculated; survivors (6) crossed onto Harosoy.
1958-59	Oct-Feb	F_1BC_7	16 seedlings PR-inoculated; 8 survived (L59g-1).
1959	Feb-Jun	F_2	129 seedlings from L59g-1 PR-inoculated; 90 survived PR; only 37 survived an accidental exposure to pentachlorophenol fumes to which Harosoy was unusually sensitive (L59g-161).
1959	Jun-Sep	F_3	37 F_3 lines from L59g-161 grown in rod rows (2 discarded for possible offtype plants, 1 short and 1 segregating late) (L59-726 to -762).
1960	Jan-Feb	F_4	Progeny test of 35 F_3 lines; 6 lines uniformly resistant; PR reaction checked at Lafayette by Athow and Probst.
1960		F_4	6 resistant F_3 lines grown in increase plots at Urbana and Lafayette; lines were similar to Harosoy in appearance. Tests at Lafayette suggested that 3 of the lines were segregating for frogeye susceptibility (no recheck on this was possible since a pathogenic culture of the organism is not available). L59g-1H, a composite of 8 F_3 lines segregating PR-reaction, tested in Uniform Test II.
1961		F_5	L59g-1R, a composite of the remaining 3 resistant F_3 lines, tested in Uniform Test II and increased in 6 states and Ontario.
1962		F_6	L59g-1R tested in Uniform Test II and increased in 7 states and Ontario.

Deviation of the 3 lines composited is as follows:

F_3 line	F_1 plant	F_1BC_6 plant
L59-731	L59g-1-1	L58-1530-1
L59-732	L59g-1-2	"
L59-738	L59g-1-3	"

Summary of the increase of Harosoy 63:

	1960 Production	Distribution*	1961	1962
Illinois	227 pounds	316 pounds	254 bu.	7,732 bu.
Indiana	543	190**	249	10,856
Iowa		28	49	
Michigan				400
Missouri		37	73	2,000
Ohio		129	88	2,200
Ontario		43	39	2,100
South Dakota				65
Wisconsin		3	4	250
Total	770 pounds	746 pounds	756 bu.	25,603 bu.

*Distribution was made in proportion to acreage of Harosoy.
**Includes 13 pounds for Michigan.

HAWKEYE 63

Hawkeye 63 was named and released in January 1963. Releasing states are Illinois, Indiana, and South Dakota. Hawkeye 63, formerly L59g-2R, is similar to Hawkeye in all respects except for the addition from Blackhawk of a dominant gene for Phytophthora rot resistance. Hawkeye 63 was developed at Urbana by the backcross method with most of the work done in the greenhouse. The details of its development are given below:

1951			Cross of Blackhawk x Hawkeye made at Ames, Iowa.
1952		F_1	Plants grown at Ames; seeds sent to Urbana in April 1956.
1956	May-Aug	F_2	Seedlings PR-inoculated; survivors (4 plants) crossed onto Hawkeye.
1956-57	Oct-Mar	F_1BC_1	Seedlings PR-inoculated; survivors (4) crossed onto Hawkeye.
1957	Apr-Aug	F_1BC_2	Seedlings PR-inoculated; survivors (2) crossed onto Hawkeye.
1957-58	Oct-Feb	F_1BC_3	Seedlings PR-inoculated; survivors (7) crossed onto Hawkeye.

1958	Feb-May	F_1BC_4	Seedlings PR-inoculated; survivors (8) crossed onto Hawkeye.
1958	Jun-Oct	F_1BC_5	Seedlings PR-inoculated; survivors (5) crossed onto Hawkeye.
1958-59	Oct-Feb	F_1BC_6	16 seedlings PR-inoculated; 6 survived (L59g-2).
1959	Feb-Jun	F_2	66 seedlings from L59g-2 PR-inoculated; 36 survived (L59g-169).
1959	Jun-Sep	F_3	36 F_3 lines from L59g-169 grown in rod rows (2 discarded as possibly offtype, short plants).
1960	Jan-Feb	F_4	Progeny test of 36 F_3 lines; 12 lines uniformly resistant.
1960		F_4	Bulk of 12 resistant lines tested in Uniform Test II as L59g-2R.
			12 lines increased in rod 3-row plots at Urbana, one line discarded as slightly late (+2 days).
1961		F_5	Bulk of 11 resistant lines tested in Uniform Test II as L59g-2R and grown in increase blocks in 5 states.
1962		F_6	L59g-2R tested in Uniform Test II and increased in 5 states.

Derivation of the 11 lines composited is as follows:

F_3 line	F_1 plant	F_1BC_5 plant	F_1BC_4 plant
L59-767	L59g-2-1	L58-1532-1	L58g-120-4
L59-768	"	"	"
L59-773	L59g-2-2	"	"
L59-774	"	"	"
L59-777	"	"	"
L59-787	L59g-2-5	L58-1532-2	"
L59-788	"	"	"
L59-792	L59g-2-9	L58-1532-3	"
L59-794	"	"	"
L59-795	"	"	"
L59-796	"	"	"

Summary of the increase of Hawkeye 63:

	1960 Production	Distribution*	1961	1962
Illinois	108 pounds	36** pounds	42 bu.	1,981 bu.
Indiana		16	40	1,500
Iowa		37	73	--
Missouri		1	1	75
Ohio		10	7	150
South Dakota				29
Total	108 pounds	100 pounds	163 bu.	3,735 bu.

*Distribution was in proportion to the Hawkeye acreage in each state.
**Includes 2 pounds for Nebraska and 1 for Michigan.

LINDARIN 63

Lindarin 63 was released in January 1963 by the states of Indiana, Ohio, and Wisconsin. Foundation seed was made available to Michigan and South Dakota from Indiana for multiplication in 1963 and release in 1964.

Lindarin 63 is quite similar to Lindarin except that it is resistant to Phytophthora root rot. Also, Lindarin 63 appears to be slightly taller with possibly somewhat less dense foliage near the top of the plant than Lindarin. Average yields, in the absence of visible Phytophthora effects, indicate that Lindarin 63 might be slightly lower in yield than Lindarin.

History and development:

1957	Winter		Mukden x Lindarin cross made by A. H. Probst at Lafayette, Indiana, and assigned cross number CX324.
1957	Summer	F_1	Grew 2 F_1 plants and made BC_1 of Lindarin x CX324.
1958	Winter	F_1BC_1	Grew 6 Phytophthora-resistant plants; made BC_2.
1958	Summer	F_1BC_2	Grew 4 Phytophthora-resistant plants; made BC_3.
1959	Winter	F_1BC_3	Grew 7 Phytophthora-resistant plants; made BC_4.
1959	Summer	F_1BC_4	Grew 2 F_1 Phytophthora-resistant plants of CX324 BC_4. Phytophthora inoculation was ineffective at planting and the resistant plants were not determined until after harvest. F_1 plant number 10 had imperfect black hilum and since it did not represent the Lindarin type, it will not be discussed further.
1959	Fall	F_2	Planted 449 seeds from F_1 plant number 13. Emergence was poor. Harvested all seed from 71 resistant plants.

1960	Spring	F_3	Planted 15 seeds from each of the 31 F_2 plants and retained the 28 F_2 plants which were homozygous resistant to Phytophthora.
1960	Summer	F_3	Planted all remnant seed from all of the above 28 resistant plants in plant rows end to end across the end of a field bordered from other soybeans by 4 rows of Lindarin. Spaced 4" apart. Each line harvested separately and seed examined.
1961	Winter	F_4	Checked each of above lines for homozygous resistance to Phytophthora. Checked each line for susceptibility to frogeye leaf spot, race 1, since Mukden was a susceptible parent. Eighteen lines were resistant to frogeye leaf spot and Phytophthora and were composited under the designation C1294R as breeders' seed. This initial 63 pounds of breeders' seed was divided proportionally, based on Lindarin acreage, among Illinois, Indiana, Michigan, Ohio, South Dakota, and Wisconsin. A proportional amount of seed was taken from all Phytophthora-resistant lines, including those susceptible to frogeye leaf spot, and composited under the number C1294 for regional testing.
1961	Summer	F_4	C1294 tested in 27 regional tests. Breeders' seed of C1294R multiplied in Ohio, Illinois, and Indiana. Indiana multiplied to meet the needs of Michigan, South Dakota, and Wisconsin also.
1962	Summer	F_5	C1294R tested in 27 regional tests. Foundation seed of C1294R multiplied in Ohio (450 bu.) and Indiana (2 200 bu.). Indiana multiplied for Michigan, 10 bushels, South Dakota, 10 bushels, and Wisconsin, 24 bushels. Illinois decided not to release and did not multiply in 1962.

Table 29. Summary of data for Uniform Test II, 1962.

Strain	Yield	Rank	Maturity[1]	Lodging	Height	Seed Quality	Seed Weight	Seed Composition	
								Protein	Oil
No. of Tests	27	27	24	26	27	23	22	14	14
A-100	35.3	13	-6.5	1.9	34	1.9	18.0	40.8	21.5
Adams	34.9	15	+1.5	2.8	41	2.0	14.5	40.5	20.8
L59g-3R	34.4	18	+2.3	2.9	42	2.0	14.8	41.2	20.1
Harosoy	37.2	7	-3.2	2.6	40	2.2	17.3	41.8	20.4
L2	36.4	10	-3.8	2.7	41	2.4	17.4	41.6	20.3
L3	35.7	12	-3.2	2.5	40	2.6	17.8	42.1	20.1
Harosoy 63	36.9	9	-4.2	2.8	41	2.2	17.1	41.8	20.3
Hawkeye	34.5	17	0	2.4	39	1.9	17.2	41.8	20.6
Hawkeye 63	33.0	19	+0.5	2.4	40	2.0	17.0	41.8	20.3
Lindarin	36.1	11	-4.4	2.1	36	1.9	15.5	41.7	20.6
Lindarin 63	35.3	13	-6.0	2.2	38	2.2	15.7	41.5	20.9
A5-5629	38.3	4	-1.2	2.6	41	1.9	17.5	40.7	21.1
A8-932	39.2	1	-4.4	2.7	39	2.0	15.3	40.8	20.9
AX50F40-2	37.9	5	-0.4	2.2	36	2.2	18.2	41.3	20.8
AX50F58-2	37.1	8	+0.3	2.1	34	2.1	19.0	41.8	21.0
AX56P64-1	38.9	2	-1.0	2.4	40	2.4	16.7	40.3	21.2
C1264	38.6	3	+1.1	2.1	40	2.5	16.8	40.7	21.1
C1265	37.8	6	-4.1	2.2	40	2.2	16.8	41.6	21.0
O-671	34.9	15	-5.8	2.8	39	2.4	16.4	41.5	20.1

[1]Days earlier (-) or later (+) than Hawkeye which matured September 23, 124 days after planting. Blackhawk (Group I) matured -6.8. Ford (Group III) matured +5.9.

Table 30. Disease data for Uniform Test II, 1962.

Strain	Bacterial Blight		Bacterial Pustule		Brown Stem Rot	Phytophthora Rot	Pod & Stem Blight	Downy Mildew		Frogeye Ind.		Purple Stain	
	Ill.	Ia.	Ill.	Ia.	Ill.	Ind.	Del.	Ind.	Del.	R1	R2[2]	Ind.	Del.
	a[1]	a	a	a	n[1]	a	n	n	n	a	a	n	n
A-100	4	3	4	2	4	S	3.2	3.5	3.9	-	S		3.8
Adams	2	3	4	3	4	S	2.0	3.0	3.2	R	S	3	2.5
L59g-3R	2	3	4	3	4	R	2.0	3.5	3.0	R	S	3	2.0
Harosoy	3	3	4	3	4	S	2.8	2.8	3.6	R	S	3	2.0
L2	3	3	3	2	4	R	2.2	2.8	3.8	R	S		2.8
L3	2	3	2	2	4	S	2.5	3.0	3.1	R	S		3.0
Harosoy 63	3	3	3	3	4	R	2.7	2.5	3.5	R	S	3	2.0
Hawkeye	2	3	2	3	4	S	2.5	4.3	3.8	S	S	3	2.0
Hawkeye 63	2	4	3	3	4	R	2.5	4.3	4.0	S	S	3	2.5
Lindarin	4	3	4	3	4	S	3.0	3.0	3.5	R	S	3	3.5
Lindarin 63	4	4	4	3	4	R	2.2	3.0	4.3	R	S	3	3.5
A5-5629	2	3	4	3	4	S	2.0	2.5	2.3	R	R	2	2.0
A8-932	2	3	4	3	4	S	2.0	2.8	3.3	R	S		1.8
AX50F40-2	2	2	4	3	4	S	3.5	3.5	3.6	R	S	3	2.8
AX50F58-2	1	3	4	3	4	S	4.3	3.8	3.7	R	S	3	2.2
AX56P64-1	2	3	4	2	4	S	2.2	2.3	3.4	R	S	4	3.5
C1264	4	3	4	2	4	S	2.2	2.5	3.6	R	R	3	2.5
C1265	3	4	3	3	4	S	2.7	3.0	1.3	R	R	3	3.0
C-671	4	3	4	4	4	R	2.0	2.8	1.0	-	S		2.3

[1]a = artificial inoculation; n = natural infection.
[2]R1 = Race 1; R2 = Race 2.

Table 31. Yield for Uniform Test II, 1962.

Strain	Mean of 27 Tests	Rank	Ridge-town Ont.	Har-row Ont.	Free-hold N.J. *	George-town Del.	Hoyt-ville Ohio	Woos-ter Ohio	Co-lum-bus Ohio	East Lan-sing Mich.	Ida Mich.	Walk-er-ton Ind.[1]	Bluff-ton Ind.[1]	La-fa-yette Ind.	Green-field Ind. *	Wor-thing-ton Ind.
A-100	35.3	13	47.6	34.6	37.9	27.7	25.1	20.3	31.0	33.5	32.2	36.0	38.6	43.8	28.4	35.8
Adams	34.9	15	41.3	32.8	41.2	28.9	20.9	21.7	31.9	29.2	29.4	30.9	39.9	42.2	29.2	43.2
L59g-3R	34.4	18	40.4	31.7	41.1	29.6	19.2	23.6	29.5	28.1	28.2	34.1	41.0	41.8	39.9	41.1
Harosoy	37.2	7	38.9	30.4	41.0	32.5	23.3	23.3	29.9	30.9	32.0	42.1	39.7	48.8	31.2	46.2
L2	36.4	10	36.5	31.0	37.3	32.6	22.5	25.4	27.0	30.1	31.7	41.8	39.0	43.5	38.3	44.9
L3	35.7	12	31.0	30.8	37.4	30.0	23.3	24.7	31.2	29.3	30.9	44.2	41.7	42.2	23.0	45.3
Har. 63	36.9	9	41.3	34.6	40.0	32.3	24.0	25.5	31.2	28.6	32.3	38.6	39.4	46.7	39.4	47.2
Hawkeye	34.5	17	34.1	35.2	37.1	25.7	22.0	23.6	26.7	29.3	29.6	37.3	38.2	43.0	21.3	44.6
Hawk.63	33.0	19	38.1	32.4	40.3	25.6	20.2	23.6	26.0	28.5	28.8	34.3	42.7	39.3	39.7	43.0
Lindarin	36.1	11	40.6	33.2	38.9	31.7	21.4	24.1	28.3	30.3	31.9	36.1	34.8	43.9	25.7	46.4
Lind.63	35.3	13	42.0	32.3	36.1	26.4	23.9	23.9	28.4	31.6	31.7	37.8	36.1	40.4	40.1	42.9
A5-5629	38.3	4	47.4	36.4	42.2	32.1	22.9	24.1	35.3	32.9	38.7	42.4	39.4	46.3	32.7	44.1
A8-932	39.2	1	49.2	31.8	43.5	29.8	23.5	21.4	31.3	32.5	35.4	40.5	41.2	44.8	26.8	41.8
AX50F40	37.9	5	36.1	37.9	41.3	27.4	21.1	24.6	28.1	29.6	31.8	39.3	41.7	48.3	31.7	50.7
AX50F58	37.1	8	39.8	32.4	35.8	28.7	21.8	24.4	29.8	33.1	32.8	37.0	44.1	45.1	32.1	46.0
AX56P64	38.9	2	47.1	33.9	43.6	34.4	23.3	23.3	31.2	29.4	34.0	44.5	41.8	47.5	30.8	48.7
C1264	38.6	3	45.1	34.8	45.5	35.5	21.3	26.1	31.0	29.6	34.0	40.2	42.9	49.1	38.2	47.1
C1265	37.8	6	52.8	33.9	38.7	33.4	22.6	22.7	30.1	30.5	36.9	44.3	38.4	47.0	34.8	45.5
0-671	34.9	15	51.5	27.4	32.9	31.9	19.3	22.8	29.8	33.5	29.1	40.7	35.8	41.2	42.7	41.6
CV(%)			10.0	7.4	20.7	7.9	13.1	14.5	11.6	7.4	7.2	9.6	6.0	6.2	12.3	7.5
LSD(5%)			8.4	3.5	4.0	3.4	NS	NS	5.0	3.2	3.3	6.2	3.9	3.9	5.9	4.7
R.Sp.(In.)			24	36	32	36	36	28	28	24	34	40	38	38	38	38

*Not included in the mean.
[1]Three replications.
[2]Irrigated.

Table 31. (Continued)

Strain	Madi-son Wis.	Shab-bona Ill.	Dwight Ill.	Ur-bana Ill.	Gi-rard Ill.	Edge-wood Ill.	Lam-ber-ton Minn.	Wa-seca Minn.	Suth-er-land Iowa	Kana-wha Iowa	Inde-pen-dence Iowa	Ames Iowa	Co-lum-bia Mo.	Cen-ter-ville S.D.	Lin-coln Nebr.[2]
A-100	37.8	30.6	32.9	51.5	41.6	34.7	36.9	28.0	41.2	38.8	32.2	34.2	22.6	35.4	49.3
Adams	37.1	31.0	35.4	53.0	48.7	35.2	28.8	26.3	43.5	32.6	29.6	36.5	31.4	38.1	43.4
L59g-3R	29.0	34.4	31.6	52.4	45.8	37.8	33.3	23.9	39.4	30.6	31.5	35.2	28.5	41.3	45.9
Harosoy	35.7	35.9	35.7	53.8	49.9	34.7	34.6	30.3	45.7	37.5	35.5	35.6	28.6	48.3	43.3
L2	36.6	36.7	33.7	52.9	47.5	39.0	33.0	29.3	41.0	36.4	34.5	34.4	26.4	46.8	47.9
L3	35.0	35.6	32.8	54.1	46.5	36.1	34.3	26.1	40.5	38.7	32.6	34.8	28.8	42.8	41.4
Har. 63	32.4	38.5	31.9	53.1	43.8	38.9	36.0	28.8	41.5	35.5	32.9	34.0	28.2	50.2	48.3
Hawkeye	37.6	29.5	34.1	48.5	43.1	34.6	32.8	24.7	42.0	33.7	32.2	33.3	28.7	48.2	38.9
Hawk. 63	34.2	26.1	31.0	40.9	43.4	34.8	32.2	23.6	38.6	29.5	29.6	33.5	27.4	44.5	40.1
Lindarin	35.9	36.6	32.8	52.6	45.3	33.6	33.2	28.4	41.3	40.1	33.1	31.0	27.1	49.0	51.6
Lind. 63	34.5	32.3	34.1	48.7	45.0	34.6	34.8	28.7	40.5	38.5	32.5	30.3	26.0	50.7	44.9
A5-5629	36.1	38.8	33.9	50.3	50.7	35.7	32.6	30.1	45.3	36.8	34.5	36.8	32.1	53.1	44.9
A8-932	42.5	36.6	39.1	53.3	52.2	37.4	41.2	35.9	47.8	41.2	40.0	35.6	27.9	59.8	43.4
AX50F40	42.4	38.5	37.3	52.9	47.8	42.4	32.8	28.1	46.0	41.0	35.0	35.2	28.6	48.2	50.1
AX50F58	40.3	35.7	38.0	53.2	46.8	37.5	31.9	28.7	41.8	37.7	33.4	37.4	30.9	45.6	46.9
AX56P64	38.8	42.5	36.8	59.0	48.9	35.4	34.6	27.3	46.6	44.8	35.5	37.2	32.7	47.6	44.8
C1264	40.8	38.1	34.3	55.7	52.3	37.5	34.1	28.1	45.0	42.0	36.1	34.4	30.5	44.8	50.7
C1265	38.2	36.2	33.4	50.3	48.1	36.0	32.6	30.1	45.3	41.1	34.2	33.5	29.2	47.4	46.3
0-671	33.9	35.3	30.1	50.2	43.3	34.2	34.4	28.5	40.7	35.9	31.8	31.9	25.5	42.2	41.1
CV(%)	8.7	7.5	7.6	5.3	6.6	10.9	2.9	3.9	4.8	7.5	6.8	6.0	8.7	--	11.1
LSD(5%)	4.5	3.7	3.7	3.9	4.4	NS	2.8	3.1	2.9	3.9	3.2	2.9	3.5	--	7.1
R.Sp.(In.)	36	40	40	40	38	37	40	40	40	40	40	40	38	42	40

Table 32. Yield rank for Uniform Test II, 1962.

Strain	Mean of 27 Tests	Ridgetown Ont.	Harrow Ont.	Freehold N.J.	Georgetown Del.	Hoytville Ohio	Wooster Ohio	Columbus Ohio	East Lansing Mich.	Ida Mich.	Walkerton Ind.	Bluffton Ind.	Lafayette Ind.	Greenfield Ind.	Worthington Ind.
				*										*	
A-100	13	4	5	13	15	1	19	7	1	8	16	14	11	15	19
Adams	15	9	10	6	13	16	17	2	16	16	19	9	14	14	13
L59g-3R	18	12	15	7	12	19	10	13	19	19	18	8	16	3	18
Harosoy	7	14	18	8	5	5	13	10	7	9	5	10	2	12	6
L2	10	16	16	15	4	10	3	17	10	12	6	13	12	6	10
L3	12	19	17	14	10	5	4	4	14	14	3	5	14	18	9
Harosoy 63	9	9	5	10	6	2	2	4	17	7	11	11	6	5	3
Hawkeye	17	18	3	16	18	11	10	18	14	15	13	16	13	19	11
Hawkeye 63	19	15	11	9	19	17	10	19	18	18	17	3	19	4	14
Lindarin	11	11	9	11	9	13	7	15	9	10	15	19	10	17	5
Lindarin 63	13	8	13	17	17	3	9	14	6	12	12	17	18	2	15
A5-5629	4	5	2	4	7	8	7	1	4	1	4	11	7	9	12
A8-932	1	3	14	3	11	4	18	3	5	3	8	7	9	16	16
AX50F40-2	5	17	1	5	16	15	5	16	11	11	10	5	3	11	1
AX50F58-2	8	13	11	18	14	12	6	11	3	6	14	1	8	10	7
AX56P64-1	2	6	7	2	2	5	13	4	13	4	1	4	4	13	2
C1264	3	7	4	1	1	14	1	7	11	4	9	2	1	7	4
C1265	6	1	7	12	3	9	16	9	8	2	2	15	5	8	8
0-671	15	2	19	19	8	18	15	11	1	17	7	18	17	1	17

*Not included in the mean.

Table 32. (Continued)

Strain	Madi-son Wis.	Shab-bona Ill.	Dwight Ill.	Ur-bana Ill.	Gi-rard Ill.	Edge-wood Ill.	Lam-ber-ton Minn.	Wa-seca Minn.	Suth-er-land Iowa	Kana-wha Iowa	Inde-pen-dence Iowa	Ames Iowa	Co-lum-bia Mo.	Cen-ter-ville S.D.	Lin-coln Nebr.
A-100	7	17	13	13	19	14	2	13	13	7	14	12	19	19	4
Adams	9	16	6	8	6	12	19	15	8	17	18	4	3	18	13
L59g-3R	19	14	17	12	12	4	10	18	13	18	17	7	11	17	9
Harosoy	13	10	5	4	4	14	5	2	4	11	3	5	9	6	15
L2	10	6	11	9	9	2	12	5	14	13	6	10	16	11	6
L3	4	12	14	3	11	8	8	16	16	8	12	9	7	15	16
Harosoy 63	18	3	16	7	15	3	3	6	11	15	11	13	12	4	5
Hawkeye	8	13	8	18	18	16	13	17	9	16	14	16	8	7	19
Hawkeye 63	16	19	18	19	16	13	17	19	19	19	18	14	14	14	18
Lindarin	12	7	14	11	13	19	11	10	12	6	10	18	15	5	1
Lindarin 63	15	15	8	17	14	16	4	7	16	9	13	19	17	3	10
A5-5629	11	2	10	14	3	10	15	3	5	12	6	3	2	2	10
A8-932	1	7	1	5	2	7	1	1	1	3	1	5	13	1	13
AX50F40-2	2	3	3	9	8	1	13	11	3	5	5	7	9	7	3
AX50F58-2	4	11	2	6	10	5	18	7	10	10	9	1	4	12	7
AX56P64-1	5	1	4	1	5	11	5	14	2	1	3	2	1	9	12
C1264	3	5	7	2	1	5	9	11	7	2	2	10	5	13	2
C1265	6	9	12	14	7	9	15	3	5	4	8	14	6	10	8
0-671	17	13	19	16	17	18	7	9	15	14	16	17	13	16	17

Table 33. Maturity, days earlier (-) or later (+) than Hawkeye, for Uniform Test II, 1962.

Strain	Mean of 24 Tests	Ridgetown Ont.	Harrow Ont.	Freehold N.J. *	Georgetown Del.	Hoytville Ohio	Wooster Ohio	Columbus Ohio	East Lansing Mich.	Ida Mich.	Walkerton Ind.	Bluffton Ind.	Lafayette Ind.	Greenfield Ind. *	Worthington Ind.
A-100	-6.5	-4	-8	- 4	-4	-11	-6	- 1	-1	- 9	-11	-13	-4	- 3	-2
Adams	+1.5	+2	+2	+ 7	0	+ 3	-2	+ 2	+6	- 2	0	- 4	0	+ 1	+2
L59g-3R	+2.3	+2	+2	+11	0	+ 2	-2	+ 4	+6	0	+ 2	- 1	+3	+ 2	+2
Harosoy	-3.2	0	+1	+ 2	0	- 2	-3	- 1	0	- 2	- 6	-11	-3	- 3	0
L2	-3.8	-1	+1	0	-1	- 4	-4	- 1	0	- 4	- 7	-12	-4	- 2	0
L3	-3.2	-1	+1	+ 1	0	- 4	-3	- 2	0	- 4	- 6	-10	-1	- 3	+1
Harosoy 63	-4.2	0	0	0	-1	- 4	-5	- 2	0	- 5	- 6	-10	-6	- 4	0
Hawkeye	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hawkeye 63	+0.5	0	-1	0	+1	+ 1	+1	0	+1	0	0	0	0	0	0
Lindarin	-4.4	-3	-6	- 1	-4	- 7	-2	- 3	0	- 9	-12	-12	-7	- 8	-1
Lindarin 63	-6.0	-2	-6	- 2	-5	- 9	-5	- 2	-1	- 9	-11	-14	-7	- 7	-1
A5-5629	-1.2	-1	-2	0	+2	- 2	-3	0	0	- 2	- 5	- 6	0	- 2	+1
A8-932	-4.4	-2	-2	- 1	-4	- 7	-7	- 2	0	- 6	- 8	-12	-4	- 2	+1
AX50F40-2	-0.4	0	-2	+ 1	0	- 1	+1	+ 1	+2	- 2	+ 1	- 7	+1	0	+1
AX50F58-2	+0.3	0	+2	0	+1	0	0	+ 1	+2	0	+ 1	+ 3	0	0	+1
AX56P64-1	-1.0	0	-1	0	+1	- 3	-3	- 1	+1	- 1	0	- 5	0	- 1	+2
C1264	+1.1	+2	+4	+ 7	+1	- 1	0	+ 2	+2	+ 1	+ 2	- 1	0	+ 1	+4
C1265	-4.1	0	+2	- 2	-1	- 5	-1	- 1	-1	- 5	- 4	-10	-7	- 5	-1
0-671	-5.8	-2	-2	- 2	0	- 4	-6	- 3	+1	- 7	- 9	-14	-6	- 5	-2
Blackhawk	-6.8	-3	-8	0	-5	- 5	-7	- 4	0	-11	- 9	-13	-6	--	-7
Ford	+5.9	+2	+8	+ 6	+3	+ 5	+9	+15	+8	+ 2	+ 2	+ 5	+5	+10	+8
Date pltd.		5-22	5-23	6-1	5-30	5-29	5-18	5-21	5-10	5-28	5-26	6-1	5-21	5-18	5-17	5-24
Hawk. mat.		9-23	10-8	10-1	9-27	9-11	9-19	9-19	9-13	10-11	10-4	10-1	9-25	9-10	9-13	9-10
Da. to mat.		124	138	122	120	105	124	121	126	136	131	122	127	115	119	109

*Not included in the mean.
[1]Irrigated.

Table 33. (Continued)

Strain	Madi-son Wis.	Dwight Ill.	Ur-bana Ill.	Gi-rard Ill.	Edge-wood Ill.	Lam-ber-ton Minn.	Wa-seca Minn.	Suth-er-land Iowa	Kana-wha Iowa	Inde-pen-dence Iowa	Ames Iowa	Co-lum-bia Mo.	Cen-ter-ville S.D.	Lin-coln Nebr.[1] *
A-100	-13	-5	-8	- 5	-5		-4	-10	-9	-5	-10	- 7	-2	-7
Adams	+ 1	0	0	+ 4	+1		+6	0	+2	+2	+ 3	+ 4	+3	0
L59g-3R	+ 3	+1	0	+ 5	0		+6	+ 2	+2	+4	+ 5	+ 4	+4	0
Harosoy	- 3	-5	-5	- 3	-3		-2	- 8	-6	-3	- 9	- 2	-1	-7
L2	- 4	-6	-5	- 3	-1		-4	- 9	-7	-3	-10	- 2	0	-7
L3	- 3	-5	-5	- 2	-2		+1	- 8	-7	-3	-10	- 2	-1	-6
Harosoy 63	- 5	-7	-5	- 3	-2		-4	-10	-8	-4	-10	- 2	-2	-6
Hawkeye	0	0	0	0	0		0	0	0	0	0	0	0	0
Hawkeye 63	+ 1	0	0	+ 1	0		+2	+ 1	0	+1	+ 2	0	+1	0
Lindarin	- 9	-5	-4	- 4	-3		-5	- 9	-7	-4	- 8	- 8	-2	-7
Lindarin 63	-11	-6	-4	- 3	-4		-3	-10	-6	-4	-10	- 8	-2	-7
A5-5629	0	0	+1	0	+3		0	- 5	-2	-2	- 6	- 2	+2	0
A8-932	- 7	-4	-2	- 2	-1		-2	-10	-7	-5	-15	+ 2	+1	-2
AX50F40-2	0	-2	-1	+ 1	+1		0	- 4	-2	-1	- 2	+ 4	+2	0
AX50F58-2	0	-1	-2	+ 1	+1		0	- 3	-3	0	0	+ 4	0	-2
AX56P64-1	- 3	-2	-2	+ 1	+1		+2	- 5	-5	-1	- 5	+ 4	0	-2
C1264	0	0	0	+ 2	+6		0	- 2	0	+2	- 4	+ 5	+1	-2
C1265	- 9	-5	-4	- 3	0		-4	-10	-6	-5	-12	- 6	-1	-5
0-671	- 7	-7	-8	- 5	-5		-2	-11	-8	-7	-13	-11	-1	-7
Blackhawk	-11	-8	-9	- 6	-5		+1	- 8	-8	-6	-13	-12	0	--
Ford	+ 9	+3	+8	+11	+7		+8	+ 4	+3	+7	+ 5	+ 5	+4	+3
Date pltd.	5-16	6-2	5-15	5-17	6-6	5-31	6-2	5-8	5-22	5-21	5-1	5-28	5-24	5-22
Hawk. mat.	10-3	9-26	9-11	8-31	9-11	--	10-17	9-27	10-4	9-28	9-16	9-12	10-1	9-26
Da. to mat.	140	116	119	106	97	--	137	142	135	130	138	107	130	127

Table 34. Lodging for Uniform Test II, 1962.

Strain	Mean of 26 Tests	Ridge-town Ont.	Har-row Ont.	Free-hold N.J. *	George-town Del.	Hoyt-ville Ohio	Woos-ter Ohio *	Co-lum-bus Ohio	East Lan-sing Mich.	Ida Mich.	Walk-er-ton Ind.	Bluff-ton Ind.	La-fa-yette Ind.	Green-field Ind. *	Wor-thing-ton Ind.
A-100	1.9	1.0	2.2	2.0	1.5	2.0	1.0	1.5	2.0	3.0	1.5	2.3	1.0	1.0	2.8
Adams	2.8	3.0	2.1	3.0	2.2	3.5	1.0	1.7	3.0	5.0	2.8	3.0	2.3	1.8	3.8
L59g-3R	2.9	4.0	2.0	3.0	2.1	3.7	1.0	2.2	3.0	5.0	2.3	3.0	2.5	2.0	3.8
Harosoy	2.6	3.0	1.6	3.0	1.8	3.0	1.0	1.2	3.0	5.0	2.3	3.3	2.0	1.3	2.8
L2	2.7	2.0	2.0	4.0	1.6	3.7	1.0	1.7	3.0	4.0	1.8	3.6	2.0	2.5	3.8
L3	2.5	3.0	1.8	3.0	1.5	2.2	1.0	1.2	3.0	4.0	1.8	3.6	2.0	1.0	3.0
Harosoy 63	2.8	3.0	1.9	3.0	1.5	3.2	1.0	1.7	3.0	4.0	2.0	4.3	2.0	2.0	3.3
Hawkeye	2.4	4.0	1.9	3.0	1.4	2.5	1.0	1.5	3.0	4.0	1.5	2.6	2.0	2.0	3.0
Hawkeye 63	2.4	4.0	1.5	3.0	1.5	2.7	1.0	1.5	3.0	4.0	1.5	2.6	2.0	1.8	3.0
Lindarin	2.1	3.0	1.5	3.0	1.8	2.0	1.0	1.0	2.0	3.0	1.5	2.6	2.0	1.0	2.0
Lindarin 63	2.2	2.0	1.5	4.0	1.8	2.2	1.0	1.2	2.0	3.0	1.5	3.3	2.0	2.0	2.8
A5-5629	2.6	3.0	2.8	3.0	1.4	3.0	1.0	1.7	3.0	4.0	2.0	3.0	1.3	1.5	4.0
A8-932	2.7	3.0	2.2	3.0	1.8	2.2	1.0	1.2	3.0	4.0	1.8	3.3	2.3	1.0	3.3
AX50F40-2	2.2	3.0	1.4	2.0	1.1	2.2	1.0	1.2	3.0	4.0	2.3	3.0	1.5	1.3	2.5
AX50F58-2	2.1	3.0	1.4	2.0	1.1	2.5	1.0	1.0	3.0	4.0	2.0	3.0	1.0	1.0	1.8
AX56P64-1	2.4	3.0	1.6	4.0	1.8	1.7	1.0	1.0	3.0	4.0	2.0	4.0	2.0	1.3	3.0
C1264	2.1	2.0	1.8	3.0	1.4	1.7	1.0	1.0	3.0	3.0	2.0	2.6	1.0	1.0	2.0
C1265	2.2	3.0	1.6	3.0	1.2	2.2	1.0	1.2	3.0	3.0	1.3	3.3	1.3	1.0	2.5
0-671	2.8	3.0	3.2	4.0	1.6	3.0	1.0	1.0	3.0	4.0	1.3	3.0	1.0	2.0	4.5

*Not included in the mean.
[1]Irrigated.

Table 34. (Continued)

Strain	Madi-son Wis.	Shab-bona Ill.	Dwight Ill.	Ur-bana Ill.	Gi-rard Ill.	Edge-wood Ill.	Lam-ber-ton Minn.	Wa-seca Minn.	Suth-er-land Iowa	Kana-wha Iowa	Inde-pen-dence Iowa	Ames Iowa	Co-lum-bia Mo.	Cen-ter-ville S.D.	Lin-coln Nebr.[1]
A-100	1.9	2.3	1.8	2.5	1.5	3.1	2.0	2.3	1.3	2.9	1.7	1.0	1.1	2.0	2.4
Adams	3.3	3.3	2.3	3.1	3.0	3.1	2.0	3.0	1.6	2.2	2.1	1.8	3.3	3.0	3.1
L59g-3R	3.4	3.3	2.4	3.3	3.3	2.9	2.8	3.3	1.9	2.4	2.2	1.9	3.3	3.0	3.2
Harosoy	3.4	3.5	2.2	3.6	2.7	3.1	1.8	3.0	1.8	3.0	2.4	1.2	1.5	2.0	3.5
L2	3.5	3.7	2.2	4.1	2.8	3.4	1.8	3.3	2.1	3.7	2.5	1.3	1.5	3.0	3.2
L3	3.4	3.4	2.1	3.6	2.4	2.7	1.8	3.3	1.7	2.6	2.4	1.2	2.0	3.0	3.2
Harosoy 63	3.4	3.6	1.9	3.7	2.5	4.1	1.8	3.0	1.8	3.9	2.4	1.2	2.2	3.0	3.2
Hawkeye	3.0	3.1	2.0	2.9	2.3	2.1	2.5	2.3	1.6	2.8	1.8	1.4	1.1	3.0	3.1
Hawkeye 63	3.0	3.2	2.0	3.2	2.5	2.5	2.5	2.3	1.7	2.7	1.8	1.4	1.1	3.0	3.0
Lindarin	2.4	2.6	1.5	2.6	2.5	3.1	1.8	2.3	1.4	2.1	1.9	1.2	1.2	3.0	2.1
Lindarin 63	2.4	2.9	1.7	3.2	2.4	3.2	2.0	2.5	1.6	3.0	2.1	1.2	1.5	3.0	2.1
A5-5629	3.4	3.6	2.2	3.9	2.2	2.5	2.0	3.0	2.4	3.6	2.1	1.2	1.3	3.0	3.2
A8-932	3.1	3.7	2.3	4.3	2.5	3.3	2.5	2.8	2.2	3.4	2.6	1.1	1.5	3.0	3.4
AX50F40-2	2.8	2.4	2.0	2.6	2.4	1.9	2.3	2.8	1.4	1.9	1.7	1.2	1.1	3.0	2.6
AX50F58-2	2.9	2.8	1.6	2.3	1.7	1.9	2.0	3.0	1.4	1.8	1.6	1.2	1.3	2.0	2.0
AX56P64-1	3.0	2.4	2.5	2.6	3.4	3.5	2.3	3.0	1.6	2.0	2.0	1.2	2.0	2.0	2.8
C1264	2.8	3.0	1.9	3.0	2.3	2.1	2.3	2.3	1.4	1.9	1.6	1.1	1.6	3.0	2.1
C1265	2.6	3.3	1.6	3.1	2.0	2.6	1.5	2.0	1.4	2.3	2.0	1.1	1.3	3.0	2.6
0-671	3.5	3.9	2.1	3.8	2.3	4.5	1.8	4.0	2.5	4.0	2.8	1.1	1.7	4.0	3.0

Table 35. Plant height for Uniform Test II, 1962.

Strain	Mean of 27 Tests	Ridgetown Ont.	Harrow Ont.	Freehold N.J.	Georgetown Del.	Hoytville Ohio	Wooster Ohio	Columbus Ohio	East Lansing Mich.	Ida Mich.	Walkerton Ind.	Bluffton Ind.	Lafayette Ind.	Greenfield Ind.	Worthington Ind.
				*										*	
A-100	34	36	31	28	26	33	22	31	36	34	34	32	37	33	37
Adams	41	46	39	33	32	40	26	36	40	40	37	42	43	41	41
L59g-3R	42	47	42	32	33	43	26	38	40	41	39	43	45	44	46
Harosoy	40	40	37	33	32	40	25	36	36	40	40	45	43	40	45
L2	41	40	36	32	34	43	26	36	36	40	41	44	44	43	47
L3	40	40	36	31	31	39	23	38	38	38	40	45	42	39	47
Harosoy 63	41	40	36	31	33	40	25	36	37	40	40	44	43	46	47
Hawkeye	39	43	40	32	30	37	25	35	36	39	41	39	42	38	44
Hawkeye 63	40	46	39	32	30	40	25	33	36	38	40	40	43	45	45
Lindarin	36	40	34	29	28	35	25	32	34	34	32	35	37	35	40
Lindarin 63	38	42	35	31	29	36	24	34	36	36	35	41	38	42	43
A5-5629	41	49	39	32	30	40	25	35	36	40	38	44	40	43	48
A8-932	39	44	35	30	29	38	23	34	37	40	37	38	39	37	43
AX50F40-2	36	38	34	30	28	35	25	32	34	34	34	35	38	35	41
AX50F58-2	34	37	32	27	26	34	22	28	38	34	34	36	38	35	39
AX56P64-1	40	41	36	32	32	38	25	32	35	39	40	42	42	42	47
C1264	40	41	39	35	33	38	25	37	39	42	41	42	41	41	44
C1265	40	44	38	34	32	41	26	36	37	36	32	40	44	44	43
0-671	39	43	37	31	31	39	24	32	37	40	38	40	39	39	42

*Not included in the mean.
[1]Irrigated.

Table 35. (Continued)

Strain	Madi-son Wis.	Shab-bona Ill.	Dwight Ill.	Ur-bana Ill.	Gi-rard Ill.	Edge-wood Ill.	Lam-ber-ton Minn.	Wa-seca Minn.	Suth-er-land Iowa	Kana-wha Iowa	Inde-pen-dence Iowa	Ames Iowa	Co-lum-bia Mo.	Cen-ter-ville S.D.	Lin-coln Nebr.[1]
A-100	35	37	36	36	38	31	33	38	37	41	36	35	27	36	38
Adams	42	45	43	48	47	36	35	41	46	48	41	44	32	36	48
L59g-3R	42	45	44	54	51	39	38	42	48	47	44	44	32	34	52
Harosoy	41	44	41	45	47	37	37	44	45	48	42	42	32	38	48
L2	42	47	41	44	48	39	37	46	42	48	41	41	32	39	49
L3	41	44	42	44	47	36	37	46	42	48	41	42	34	42	49
Harosoy 63	41	46	42	46	48	42	39	45	43	47	41	42	33	43	50
Hawkeye	42	42	40	41	46	35	38	41	45	46	41	42	32	39	45
Hawkeye 63	41	45	40	45	46	38	38	45	46	46	42	42	31	38	46
Lindarin	36	39	36	41	39	33	32	38	39	44	38	38	29	41	42
Lindarin 63	38	41	39	45	41	36	35	40	42	44	38	38	30	40	44
A5-5629	43	50	47	51	46	37	36	44	43	44	42	39	36	38	50
A8-932	43	45	41	45	45	36	36	45	42	46	40	39	32	42	45
AX50F40-2	37	40	36	39	39	31	33	40	40	43	36	37	28	38	42
AX50F58-2	35	36	35	36	37	31	31	37	38	41	36	36	26	36	41
AX56P64-1	42	42	42	44	47	37	37	41	46	50	43	43	32	39	49
C1264	41	43	41	45	46	36	36	42	45	49	43	42	31	41	44
C1265	43	42	43	44	48	38	37	43	44	48	43	42	34	39	47
0-671	41	49	41	43	41	37	37	42	41	44	38	37	34	41	42

Table 36. Seed quality for Uniform Test II, 1962.

Strain	Mean of 23 Tests	Ridgetown Ont.	Harrow Ont.	Freehold N.J.	Georgetown Del.	Hoytville Ohio	Wooster Ohio	Columbus Ohio	East Lansing Mich.	Ida Mich.	Walkerton Ind.	Bluffton Ind.	Lafayette Ind.	Greenfield Ind.	Worthington Ind.
				*										*	
A-100	1.9	2.0	2.5	2.0	2.2	1.0	1.0	1.0	1.0	2.0	2.0	1.0	1.0	3.0	4.0
Adams	2.0	2.0	1.5	1.0	2.0	1.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	2.5	4.0
L59g-3R	2.0	2.0	1.5	2.0	2.2	1.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	1.5	4.0
Harosoy	2.2	3.0	4.5	3.0	3.2	1.0	1.2	1.5	2.0	2.0	1.5	1.5	1.5	2.5	4.0
L2	2.4	3.0	4.5	2.0	2.5	1.0	1.2	2.2	1.0	2.0	2.0	1.5	2.0	3.0	4.0
L3	2.6	3.0	4.6	3.0	3.0	1.0	1.0	2.0	1.0	2.0	3.0	2.0	4.0	3.5	4.0
Harosoy 63	2.2	2.0	4.4	2.0	2.2	1.0	1.2	1.7	1.0	2.0	2.0	1.5	2.0	3.0	3.5
Hawkeye	1.9	2.0	1.5	1.0	2.8	1.0	1.0	1.0	1.0	2.0	1.5	1.0	1.5	3.5	3.5
Hawkeye 63	2.0	2.0	1.5	2.0	2.8	1.0	1.0	1.2	1.0	3.0	2.0	1.0	1.5	2.5	3.5
Lindarin	1.9	2.0	3.0	2.0	2.8	1.0	1.0	1.2	1.0	2.0	2.0	1.5	1.5	2.5	4.0
Lindarin 63	2.2	2.0	3.0	2.0	3.0	1.0	1.2	1.2	1.0	2.0	1.5	1.5	2.0	2.5	4.0
A5-5629	1.9	1.0	1.5	1.0	3.0	1.0	1.0	1.0	1.0	2.0	2.0	1.0	1.5	2.0	3.0
A8-932	2.0	2.0	4.0	2.0	2.5	1.7	1.0	1.0	1.0	2.0	2.5	1.5	1.5	3.0	3.5
AX50F40-2	2.2	2.0	2.8	2.0	3.0	1.0	1.0	1.2	2.0	3.0	3.0	1.5	3.0	2.5	3.5
AX50F58-2	2.1	2.0	3.0	2.0	2.8	1.0	1.0	1.0	1.0	2.0	2.0	1.0	2.0	3.0	3.5
AX56P64-1	2.4	2.0	4.2	3.0	3.5	1.5	1.0	1.2	2.0	2.0	3.0	2.0	3.0	2.5	4.0
C1264	2.5	3.0	4.4	2.0	2.5	1.2	1.0	1.5	2.0	2.0	3.0	2.0	2.5	2.0	4.0
C1265	2.2	2.0	4.2	2.0	2.5	1.0	1.0	1.7	2.0	2.0	1.5	1.5	2.0	2.5	4.0
0-671	2.4	2.0	4.3	1.0	3.2	1.5	1.0	1.0	2.0	2.0	2.0	2.0	3.0	4.0	3.0

*Not included in the mean.
[1]Irrigated.

Table 36. (Continued)

Strain	Madison Wis.	Shabbona Ill.	Dwight Ill.	Urbana Ill.	Girard Ill.	Edgewood Ill.	Lamberton Minn.	Waseca Minn.	Sutherland Iowa *	Kanawha Iowa *	Independence Iowa *	Ames Iowa *	Columbia Mo.	Centerville S.D.	Lincoln Nebr.[1]
A-100	2.0	1.5	2.5	2.1	2.5	3.3	2.5	2.0	1.0	1.0	1.0	1.0	2.0	1.0	2.4
Adams	2.0	1.1	2.1	1.9	2.5	2.5	2.8	2.5	1.0	1.0	1.0	1.0	2.5	2.0	1.9
L59g-3R	2.0	1.0	2.5	1.9	2.9	2.9	2.5	2.3	1.0	1.0	1.0	1.0	2.5	1.0	2.0
Harosoy	3.0	1.9	2.4	1.6	2.5	2.8	2.8	3.0	1.0	1.0	1.0	1.0	1.5	1.0	1.8
L2	2.0	1.9	2.9	2.0	3.4	3.4	3.0	2.8	1.0	1.0	1.0	1.0	2.0	2.0	2.2
L3	2.0	1.9	2.8	2.4	2.5	3.8	2.8	3.0	1.0	1.0	1.0	1.0	2.0	3.0	2.1
Harosoy 63	2.0	1.8	2.8	2.0	2.9	3.1	3.0	3.0	1.0	1.0	1.0	1.0	1.5	2.0	1.8
Hawkeye	2.0	1.5	2.6	1.8	2.8	2.9	3.0	2.5	1.0	1.0	1.0	1.0	2.0	1.0	2.0
Hawkeye 63	1.0	1.4	2.5	1.8	3.3	2.5	3.0	3.0	1.0	1.0	1.0	1.0	1.5	2.0	1.6
Lindarin	1.0	1.6	2.6	1.6	2.5	2.9	2.0	3.0	1.0	1.0	1.0	1.0	1.5	1.0	1.2
Lindarin 63	2.0	1.5	2.6	2.0	2.9	3.5	2.5	3.0	1.0	1.0	1.0	1.0	2.0	2.0	2.1
A5-5629	2.0	1.3	2.5	2.0	2.0	2.8	3.0	3.0	1.0	1.0	1.0	1.0	2.0	1.0	2.1
A8-932	2.0	1.1	2.5	2.3	2.3	2.8	2.5	2.8	1.0	1.0	1.0	1.0	1.5	1.0	1.9
AX50F40-2	2.0	1.1	2.1	2.1	2.8	3.3	3.0	2.8	1.0	1.0	1.0	1.0	2.0	1.0	2.5
AX 50F58-2	2.0	1.9	2.3	1.8	2.8	3.1	3.0	2.8	1.0	1.0	1.0	1.0	3.0	1.0	1.8
AX56P64-1	2.0	1.5	2.4	2.0	3.0	3.8	2.5	2.3	1.0	1.0	1.0	1.0	3.0	2.0	2.1
C1264	3.0	1.1	2.6	2.0	3.0	4.1	3.0	3.0	1.0	1.0	1.0	1.0	3.0	2.0	2.0
C1265	2.0	1.6	2.8	2.0	3.3	3.8	2.5	3.0	1.0	1.0	1.0	1.0	1.5	1.0	2.0
0-671	3.0	1.9	2.9	2.6	3.0	3.0	2.8	3.0	1.0	1.0	1.0	1.0	2.0	1.0	1.9

Table 37. Percentage of protein for Uniform Test II, 1962.

Strain	Mean of 14 Tests	Harrow Ont.	Free-hold N.J. *	George-town Del.	Colum-bus Ohio	East Lansing Mich.	Walk-erton Ind.	Lafa-yette Ind.
A-100	40.8	41.9	40.7	42.0	42.3	41.8	41.3	40.4
Adams	40.5	40.8	40.7	42.7	41.2	41.0	41.9	40.3
L59g-3R	41.2	41.3	41.3	43.6	41.7	42.4	43.7	40.5
Harosoy	41.8	43.9	42.5	43.3	42.9	43.7	43.3	42.1
L2	41.6	44.1	41.9	42.8	43.0	43.4	43.1	42.0
L3	42.1	45.2	42.7	43.2	42.8	43.3	43.3	42.7
Harosoy 63	41.8	44.6	42.1	43.4	42.8	43.0	43.3	42.2
Hawkeye	41.8	41.8	41.8	44.3	43.0	42.8	43.5	41.2
Hawkeye 63	41.8	42.4	41.6	43.7	42.5	43.9	43.1	42.0
Lindarin	41.7	42.0	42.6	42.5	43.7	44.5	43.0	41.6
Lindarin 63	41.5	42.9	42.2	42.9	42.5	44.0	42.5	41.9
A5-5629	40.7	40.9	39.9	42.1	40.6	42.0	42.9	40.9
A8-932	40.8	43.3	40.1	41.1	42.0	42.0	42.2	41.2
AX50F40-2	41.3	41.7	41.0	43.5	42.9	42.8	40.9	40.9
AX50F58-2	41.8	43.1	41.1	43.5	43.4	42.6	42.4	40.8
AX56P64-1	40.3	41.5	40.9	41.3	41.9	41.2	41.7	40.0
C1264	40.7	43.1	40.8	44.4	42.2	41.5	41.8	40.7
C1265	41.6	43.6	40.9	42.9	42.5	43.8	42.7	42.3
0-671	41.5	44.7	40.1	43.3	44.1	42.4	42.9	41.1

*Not included in the mean.
[1]Irrigated.

Table 37. (Continued)

Strain	Madi-son Wis.	Ur-bana Ill.	Gi-rard Ill.	Waseca Minn.	Kana-wha Iowa	Ames Iowa	Center-ville S.D.	Lin-coln Nebr.[1]
A-100	40.4	40.8	40.7	40.4	40.0	41.4	39.1	39.3
Adams	39.5	40.2	41.4	39.8	40.2	40.0	38.5	39.5
L59g-3R	40.5	40.5	41.9	40.7	40.8	41.1	38.6	39.1
Harosoy	41.7	41.1	41.5	40.4	40.6	41.0	39.3	39.4
L2	41.2	40.7	41.7	40.7	41.0	41.7	37.7	39.0
L3	42.5	41.1	41.6	41.1	41.1	42.3	40.0	39.5
Harosoy 63	42.6	41.0	41.1	40.5	40.8	41.7	38.8	39.1
Hawkeye	41.2	41.7	43.0	41.1	41.0	41.6	39.2	39.7
Hawkeye 63	41.4	41.9	42.0	41.3	41.3	41.5	39.3	39.5
Lindarin	42.5	41.0	41.7	40.9	41.0	41.7	39.1	39.2
Lindarin 63	41.7	40.0	40.8	40.8	40.5	41.9	39.0	39.1
A5-5629	40.5	39.2	41.0	40.6	41.1	41.1	38.7	38.8
A8-932	41.4	38.9	40.4	40.7	40.4	41.1	38.4	38.5
AX50F40-2	41.7	41.1	41.5	40.7	41.0	40.5	38.9	39.5
AX50F58-2	41.9	41.0	42.0	41.6	42.1	41.5	39.6	39.6
AX56P64-1	40.9	39.0	40.8	39.9	40.0	40.4	37.4	38.0
C1264	40.3	40.0	40.7	39.0	40.0	40.4	37.3	38.0
C1265	42.1	41.1	41.2	40.7	41.0	41.1	38.9	38.9
0-671	40.8	40.3	41.1	40.6	40.7	41.6	38.3	38.9

Table 38. Percentage of oil for Uniform Test II, 1962.

Strain	Mean of 14 Tests	Harrow Ont.	Free-hold N.J.	George-town Del.	Colum-bus Ohio	East Lansing Mich.	Walk-erton Ind.	Lafa-yette Ind.
			*					
A-100	21.5	22.0	21.2	22.5	20.9	21.0	21.5	21.7
Adams	20.8	21.0	21.0	21.0	20.6	19.5	21.5	22.2
L59g-3R	20.1	19.6	20.2	20.1	21.3	19.0	20.4	21.5
Harosoy	20.4	18.7	19.6	20.7	21.0	18.6	20.1	21.0
L2	20.3	19.2	20.3	21.3	20.1	19.0	20.0	20.7
L3	20.1	18.8	19.7	21.2	20.3	19.2	20.1	20.2
Harosoy 63	20.3	19.3	19.8	21.5	19.8	18.2	19.4	20.9
Hawkeye	20.6	20.5	20.9	21.4	20.1	19.7	20.4	21.6
Hawkeye 63	20.3	20.4	20.4	20.6	20.9	19.2	20.1	20.9
Lindarin	20.6	19.7	20.0	21.7	20.3	19.0	20.7	22.5
Lindarin 63	20.9	20.9	20.7	21.9	20.2	18.9	21.1	22.2
A5-5629	21.1	21.0	21.0	21.7	22.1	20.4	20.5	21.9
A8-932	20.9	19.4	20.6	21.9	20.5	19.7	20.6	22.6
AX50F40-2	20.8	20.6	21.0	20.3	20.5	19.3	21.9	21.4
AX50F58-2	21.0	20.5	20.9	21.7	21.9	19.5	21.6	21.8
AX56P64-1	21.2	21.0	20.9	21.4	21.2	20.3	21.2	21.9
C1264	21.1	20.1	20.6	21.6	20.8	19.3	21.5	22.6
C1265	21.0	19.7	21.3	22.3	20.6	18.8	20.9	22.4
0-671	20.1	18.4	20.5	19.9	20.9	18.5	20.0	20.4

*Not included in the mean.
[1]Irrigated.

Table 38. (Continued)

Strain	Madison Wis.	Urbana Ill.	Girard Ill.	Waseca Minn.	Kanawha Iowa	Ames Iowa	Centerville S.D.	Lincoln Nebr.[1]
A-100	21.3	22.4	22.7	19.9	21.1	21.1	20.9	21.7
Adams	21.4	21.4	22.7	17.2	19.0	21.4	20.4	21.9
L59g-3R	20.1	20.8	21.7	16.2	19.6	20.4	20.3	20.5
Harosoy	19.9	22.3	22.2	19.0	19.7	20.7	20.3	21.2
L2	19.8	21.7	22.2	18.2	19.5	21.4	20.3	20.6
L3	19.6	21.9	21.0	17.8	19.2	20.6	20.1	20.8
Harosoy 63	19.8	22.0	22.4	18.4	19.9	20.6	20.6	21.5
Hawkeye	20.9	21.4	22.3	18.0	19.2	20.6	20.5	21.6
Hawkeye 63	21.1	20.5	21.6	18.4	19.0	20.2	20.4	21.4
Lindarin	19.6	22.1	22.0	18.2	20.3	20.4	20.5	21.3
Lindarin 63	19.6	22.3	22.9	19.0	19.9	20.7	21.0	21.7
A5-5629	21.2	21.3	22.6	18.8	19.9	21.2	20.8	21.7
A8-932	20.3	21.9	22.5	18.8	20.0	22.1	21.0	21.1
AX50F40-2	21.3	21.6	22.3	18.7	20.0	21.6	20.5	21.8
AX50F58-2	20.8	22.4	22.6	17.9	19.9	21.0	20.4	21.5
AX56P64-1	20.2	22.9	22.6	19.0	20.3	21.3	21.5	21.9
C1264	20.8	22.7	22.3	19.3	20.1	21.8	20.8	21.6
C1265	20.5	22.3	22.7	19.0	21.2	20.8	20.9	22.4
O-671	20.1	21.5	21.5	18.1	20.6	20.1	19.8	21.8

Table 39. Two-year summary of data for Uniform Test II, 1961-1962.

Strain	Yield	Rank	Maturity[1]	Lodging	Height	Seed Quality	Seed Weight	Seed Composition	
								Protein	Oil
No. of Tests	54	54	41	51	54	46	46	41	41
Adams	36.5	8	+1.5	2.6	42	1.9	14.8	40.5	21.2
L59g-3R	35.4	10	+2.1	2.8	43	1.9	15.0	40.9	20.6
Harosoy	38.0	4	-3.2	2.6	41	2.1	17.9	41.6	20.6
Harosoy 63	37.5	6	-4.0	2.7	42	2.1	17.8	41.7	20.6
Hawkeye	35.2	11	0	2.3	40	1.9	17.6	41.8	20.7
Hawkeye 63	34.1	12	+0.4	2.4	41	2.0	17.5	41.9	20.6
Lindarin	37.3	7	-4.0	2.1	37	1.9	16.0	41.8	20.8
Lindarin 63	35.9	9	-4.8	2.3	39	2.1	16.2	41.5	21.1
A5-5629	39.2	2	-1.1	2.5	41	1.8	18.0	40.7	21.3
AX50F40-2	38.8	3	-0.4	2.1	37	2.2	18.8	41.3	21.0
AX50F58-2	37.6	5	+0.4	2.0	35	2.1	19.4	41.8	21.3
AX56P64-1	40.3	1	-1.3	2.4	41	2.2	17.5	40.3	21.6

[1]Days earlier (-) or later (+) than Hawkeye which matured September 24, 124 days after planting. Blackhawk (Group I) matured -6.0. Ford (Group III) matured +5.1.

Table 40. Two-year summary of yield and yield rank for Uniform Test II, 1961-1962.

Strain	Mean of 54 Tests	Ridge-town Ont.	George-town Del.	Hoyt-ville Ohio	Woos-ter Ohio	Co-lum-bus Ohio	East Lan-sing Mich.	Ida Mich.	Walk-er-ton Ind.	Bluff-ton Ind.	Lafa-yette Ind.	Green-field Ind.	Wor-thing-ton Ind.
Adams	36.5	45.2	29.5	31.4	28.4	42.4	30.7	31.7	34.8	44.6	38.0	32.7	45.3
L59g-3R	35.4	44.2	27.0	27.7	29.5	38.9	29.9	30.6	37.9	44.3	37.8	39.7	42.5
Harosoy	38.0	47.7	28.7	33.1	31.9	38.6	35.7	34.6	42.2	43.2	41.6	33.2	44.9
Harosoy 63	37.5	45.2	27.4	33.2	33.8	40.6	34.5	34.5	39.7	43.2	41.4	39.2	46.2
Hawkeye	35.2	37.9	26.0	29.8	32.8	35.5	31.8	31.0	36.2	41.6	40.1	27.3	43.8
Hawkeye 63	34.1	38.3	22.5	28.8	31.6	35.7	31.6	31.7	37.6	40.8	38.3	37.1	43.4
Lindarin	37.3	44.7	28.2	30.9	33.5	38.9	34.0	35.1	37.7	43.3	39.4	33.6	48.2
Lindarin 63	35.9	42.7	24.7	30.3	32.2	37.8	34.2	35.5	38.1	42.4	36.8	41.5	43.9
A5-5629	39.2	52.2	30.0	30.2	32.8	41.7	38.3	40.7	40.3	43.9	42.8	36.2	45.0
AX50F40-2	38.8	39.2	27.5	32.9	29.9	38.2	32.9	33.6	41.5	45.2	45.7	33.8	47.7
AX50F58-2	37.6	40.7	25.2	30.0	32.0	42.0	33.7	30.7	37.5	44.3	41.4	33.4	43.5
AX56P64-1	40.3	54.3	28.7	33.2	32.2	40.2	35.7	35.7	45.8	49.6	43.7	33.6	49.3

	Yield Rank												
Adams	8	4	2	5	12	1	11	8	12	3	10	11	5
L59g-3R	10	7	8	12	11	6	12	12	7	4	11	2	12
Harosoy	4	3	3	3	8	8	2	5	2	8	4	10	7
Harosoy 63	6	4	7	1	1	4	4	6	5	8	5	3	4
Hawkeye	11	12	9	10	3	12	9	10	11	11	7	12	9
Hawkeye 63	12	11	12	11	9	11	10	8	9	12	9	4	11
Lindarin	7	6	5	6	2	6	6	4	8	7	8	7	2
Lindarin 63	9	8	11	7	5	10	5	3	6	10	12	1	8
A5-5629	2	2	1	8	3	3	1	1	4	6	3	5	6
AX50F40-2	3	10	6	4	10	9	8	7	3	2	1	6	3
AX50F58-2	5	9	10	9	7	2	7	11	10	4	5	9	10
AX56P64-1	1	1	3	1	5	5	2	2	1	1	2	7	1

Table 40. (Continued)

Strain	Madison Wis.	Shabbona Ill.	Dwight Ill.	Urbana Ill.	Girard Ill.	Edgewood Ill.	Waseca Minn.	Sutherland Iowa	Kanawha Iowa	Independence Iowa	Ames Iowa	Centerville S.D.	Lincoln Nebr.
Adams	33.2	37.1	34.0	49.7	46.4	38.6	29.2	41.6	33.6	33.7	35.8	35.8	41.9
L59g-3R	28.3	38.6	32.0	48.4	44.0	37.0	25.8	38.6	31.4	33.1	34.6	35.9	42.9
Harosoy	32.5	40.2	35.6	49.3	45.1	39.0	32.9	43.8	35.5	35.3	36.3	39.3	44.5
Harosoy 63	30.9	41.2	32.8	49.9	44.6	39.5	30.6	40.6	32.7	33.4	35.1	37.9	46.4
Hawkeye	33.1	33.3	33.6	45.5	41.7	36.8	25.1	40.8	33.1	34.9	35.0	39.7	38.8
Hawkeye 63	30.2	32.8	31.8	41.4	41.0	36.3	24.6	37.8	30.2	32.8	34.4	38.4	40.0
Lindarin	31.6	38.0	32.4	47.9	43.0	38.1	31.4	41.1	34.9	32.2	33.7	42.9	49.9
Lindarin 63	30.1	35.0	32.8	46.4	43.3	36.2	32.4	40.3	32.4	31.7	33.0	40.7	42.9
A5-5629	33.5	41.0	35.4	49.9	48.7	36.4	32.6	45.2	36.0	37.4	35.3	43.2	44.7
AX50F40-2	36.1	41.1	36.5	48.7	46.8	46.0	31.1	45.5	37.9	36.0	36.8	42.0	50.0
AX50F58-2	35.5	40.6	35.9	50.1	47.7	41.4	30.7	41.8	36.2	33.2	37.5	39.4	46.8
AX56P64-1	34.3	45.5	36.5	51.6	48.2	40.4	32.0	45.9	39.5	36.6	38.6	40.9	49.5

	Yield Rank												
Adams	5	9	6	5	5	6	9	6	7	6	5	12	10
L59g-3R	12	7	11	8	8	8	10	11	11	9	9	11	8
Harosoy	7	6	4	6	6	5	1	4	5	4	4	8	7
Harosoy 63	9	2	8	3	7	4	8	9	9	7	7	10	5
Hawkeye	6	12	7	11	11	9	11	8	8	5	8	6	12
Hawkeye 63	10	11	12	12	12	11	12	12	12	10	10	9	11
Lindarin	8	8	10	9	10	7	5	7	6	11	11	2	2
Lindarin 63	11	10	8	10	9	12	3	10	10	12	12	5	8
A5-5629	4	4	5	3	1	10	2	3	4	1	6	1	6
AX50F40-2	1	3	1	7	4	1	6	2	2	3	3	3	1
AX50F58-2	2	5	3	2	3	2	7	5	3	8	2	7	4
AX56P64-1	3	1	1	1	2	3	4	1	1	2	1	4	3

Table 41. Three-year summary of data for Uniform Test II, 1960-1962.

Strain	Yield	Rank	Maturity[1]	Lodging	Height	Seed Quality	Seed Weight	Seed Composition	
								Protein	Oil
No. of Tests	80	80	65	74	79	65	68	67	67
Adams	37.3	3	+1.9	2.5	41	1.9	15.2	40.6	21.4
L59g-3R	36.6	5	+2.4	2.6	42	1.9	15.4	41.1	20.8
Harosoy	38.2	1	-3.0	2.5	40	2.1	18.1	41.7	20.8
Harosoy 63[2]	38.1	2	-3.8	2.5	40	2.1	18.1	41.7	20.8
Hawkeye	35.6	6	0	2.1	39	1.8	17.9	41.9	21.0
Hawkeye 63	35.1	7	+0.4	2.2	40	1.9	17.8	42.0	20.9
Lindarin	36.9	4	-3.7	2.0	35	1.8	16.4	41.8	21.1

[1]Days earlier (-) or later (+) than Hawkeye which matured September 25, 123 days after planting. Blackhawk (Group I) matured -5.5. Ford (Group III) matured +4.6.
[2]L59g-1H in 1960.

Table 42. Three-year summary of yield and yield rank for Uniform Test II, 1960-1962.

Strain	Mean of 80 Tests	Ridgetown Ont.	Freehold N.J.[1]	Hoytville Ohio	Wooster Ohio	Columbus Ohio	Ida Mich.	Walkerton Ind.	Bluffton Ind.	Lafayette Ind.	Greenfield Ind.	Worthington Ind.	Madison Wis.
Years Tested		1960-1962	1960, 1962	1960-1962	1960-1962	1960-1962	1960-1962	1960-1962	1960-1962	1960-1962	1960-1962	1960-1962	1960-1962
Adams	37.3	42.8	37.8	30.4	34.4	46.6	33.1	37.2	44.1	41.4	35.5	46.0	33.8
L59g-3R	36.6	42.1	36.3	28.7	36.1	45.3	31.6	39.6	44.0	39.2	40.7	44.6	30.6
Harosoy	38.2	44.9	37.7	30.8	35.4	42.3	34.6	42.2	44.4	43.1	36.3	46.3	33.8
Harosoy 63[2]	38.1	43.6	37.0	30.3	38.2	41.6	35.1	39.9	44.8	43.2	41.0	46.8	33.2
Hawkeye	35.6	37.9	32.5	27.9	36.9	39.2	32.4	36.8	41.2	43.0	29.2	43.9	33.8
Hawkeye 63	35.1	38.9	33.8	27.5	36.7	39.3	33.1	37.0	41.2	41.6	37.9	43.9	31.5
Lindarin	36.9	41.6	33.1	28.1	37.0	42.0	35.6	36.6	43.3	41.2	36.1	47.7	33.2
		Yield Rank											
Adams		3	3	1	2	7	1	4	4	3	5	6	4	1
L59g-3R		5	4	4	4	5	2	7	3	4	7	2	5	7
Harosoy		1	1	2	1	6	3	3	1	2	2	4	3	1
Harosoy 63[2]		2	2	3	3	1	5	2	2	1	1	1	2	4
Hawkeye		6	7	7	6	3	7	6	6	6	3	7	6	1
Hawkeye 63		7	6	5	7	4	6	4	5	6	4	3	6	6
Lindarin		4	5	6	5	2	4	1	7	5	6	5	1	4

[1]Jamesburg, New Jersey, 1960.
[2]L59g-1H in 1960.

Table 42. (Continued)

Strain	Shabbona Ill.	Dwight Ill.	Urbana Ill.	Girard Ill.	Edgewood Ill.	Waseca Minn.	Sutherland Iowa	Kanawha Iowa	Independence Iowa	Ames Iowa	Kirksville Mo.	Concord Nebr.	Lincoln Nebr.
Years Tested	1960-1962	1960-1962	1960-1962	1960-1962	1960-1962	1960-1962	1960-1962	1960-1962	1960-1962	1960-1962	1960, 1961	1960, 1961	1960-1962
Adams	39.1	34.5	46.0	44.1	40.6	27.0	41.2	31.6	34.9	37.1	26.5	34.3	42.0
L59g-3R	40.5	32.5	44.9	44.1	39.3	24.7	38.6	29.7	33.9	36.9	28.5	32.5	43.2
Harosoy	40.8	35.9	46.4	44.0	41.7	30.4	41.6	32.0	35.6	37.0	27.2	34.6	45.9
Harosoy 63[2]	42.6	35.6	46.8	45.4	41.9	28.1	39.8	30.0	34.8	36.7	27.0	33.5	45.9
Hawkeye	35.2	32.2	42.0	40.6	38.3	23.5	40.1	30.9	34.9	36.6	25.8	33.2	42.4
Hawkeye 63	35.1	32.2	39.8	40.9	37.7	23.7	37.6	28.7	32.9	35.6	25.7	32.4	43.3
Lindarin	39.0	31.6	45.3	41.5	41.1	27.6	40.0	31.4	33.6	34.7	24.0	33.5	46.3
	Yield Rank												
Adams	4	3	3	2	4	4	2	2	2	1	4	2	3
L59g-3R	3	4	5	2	5	5	6	6	5	3	1	6	5
Harosoy	2	1	2	4	2	1	1	1	1	2	2	1	2
Harosoy 63[2]	1	2	1	1	1	2	5	5	4	4	3	3	2
Hawkeye	6	5	6	7	6	7	3	4	2	5	5	5	6
Hawkeye 63	7	5	7	6	7	6	7	7	7	6	6	7	4
Lindarin	5	7	4	5	3	3	4	3	6	7	7	3	1

UNIFORM PRELIMINARY TEST II - 1962

Strain	Originating Agency	Origin	Generation Composited
Harosoy	Research Station, Harrow, Ont.	Mandarin (2) x A.K.	F_5
Hawkeye	Iowa A.E.S. & U.S.R.S.L.	Mukden x Richland	F_4
A5-5515-2	Iowa A.E.S. & U.S.R.S.L.	Ogden x Hawkeye	F_9
A5-5629-4	Iowa A.E.S. & U.S.R.S.L.	Roanoke x Hawkeye	F_9
C1273	Purdue A.E.S. & U.S.R.S.L.	Mandarin (Ottawa) x Clark	F_6
U6-N171	Nebr. A.E.S. & U.S.R.S.L.	Radiated Hawkeye	N_3
U7-6804	Nebr. A.E.S. & U.S.R.S.L.	Hawkeye x H6150	F_7
W7-2420	Wis. A.E.S. & U.S.R.S.L.	Seneca x W9-1982-32	F_5

Identification of Parent Strains

H6150	Sel. from Lincoln (2) x Richland.
W9-1982-32	Sel. from Hawkeye x Manchu.

Data were reported from 13 locations in 1962 for the two checks and six experimental strains in this test.

Only two strains, C1273 and A5-5629-4, outyielded Harosoy. U7-6804 yielded well for its early maturity.

The selection from radiated Hawkeye was slightly later but otherwise did not differ greatly from Hawkeye in average performance.

Table 43. Summary of data for Uniform Preliminary Test II, 1962.

Strain	Yield	Rank	Maturity[1]	Lodging	Height	Seed Quality	Seed Weight	Seed Composition	
								Protein	Oil
No. of Tests	13	13	13	11	13	10	10	8	8
Harosoy	36.0	3	-2.0	2.5	38	2.1	17.0	41.9	19.8
Hawkeye	32.9	7	0	2.2	38	1.3	17.4	41.5	20.2
A5-5515-2	35.2	4	+2.2	2.2	37	1.9	16.5	39.4	21.2
A5-5629-4	36.5	2	+0.8	2.7	41	1.4	17.2	40.0	21.1
C1273	37.4	1	+0.8	2.8	34	2.0	19.5	42.0	19.8
U6-N171	33.4	6	+1.5	2.2	38	1.6	17.5	41.3	20.4
U7-6804	34.7	5	-3.2	2.0	35	2.3	17.1	40.3	21.3
W7-2420	32.7	8	-1.4	2.2	39	1.7	17.0	41.5	20.1

[1]Days earlier (-) or later (+) than Hawkeye which matured September 24, 126 days after planting. Blackhawk (Group I) matured -6.6. Ford (Group III) matured +6.6.

Table 44. Disease data for Uniform Preliminary Test II, 1962.

Strain	Bacterial Blight	Bacterial Pustule	Brown Stem Rot	Phytophthora Rot	Pod & Stem Blight	Downy Mildew		Frogeye Ind.		Purple Stain	
	Ill.	Ill.	Ill.	Ind.	Del.	Ind.	Del.	R1	R2[2]	Ind.	Del.
	a[1]	a	n[1]	a	n	n	n	a	a	n	n
Harosoy	3	4	4	S	2.8	2.5	3.6	R	S	3	2.0
Hawkeye	2	2	4	S	2.5	4.5	3.8	S	S	3	2.0
A5-5515-2	4	4	4	S	2.0	3.5	3.3	-	S		1.5
A5-5629-4	3	3	4	S	2.0	1.0	3.0	R	R		2.0
C1273	4	2	4	S	2.0	1.5	3.5	S	S	2	1.5
U6-N171	3	4	4	S	2.5	4.0	4.0	-	S		2.0
U7-6804	3	3	4	S	1.5	3.0	4.3	-	S		1.5
W7-2420	3	4	4	Seg.	3.0	4.5	4.5	-	S		1.5

[1]a = artificial inoculation; n = natural infection.
[2]R1 = Race 1; R2 = Race 2.

Table 45. Yield, yield rank, and maturity, days earlier (-) or later (+) than Hawkeye, for Uniform Preliminary Test II, 1962.

Strain	Mean of 13 Tests	Ridge-town Ont.	Harrow Ont.	Hoyt-ville Ohio	Woos-ter Ohio	Colum-bus Ohio	East Lansing Mich.
Harosoy	36.0	44.2	27.8	22.5	20.3	30.9	30.9
Hawkeye	32.9	33.1	34.0	21.2	19.9	27.6	28.5
A5-5515-2	35.2	40.6	33.0	21.9	24.2	30.2	31.7
A5-5629-4	36.5	47.7	38.6	21.4	23.3	31.9	30.1
C1273	37.4	53.0	34.5	19.8	20.1	28.8	31.3
U6-N171	33.4	32.3	35.2	21.6	18.3	28.6	28.8
U7-6804	34.7	41.5	33.4	20.7	19.1	30.6	32.6
W7-2420	32.7	35.7	32.6	18.9	24.2	28.7	26.1
Coef. of Var. (%)		7.8	6.5	18.3	16.4	6.6	7.4
L.S.D. (5%)		7.4	5.2	NS	NS	NS	NS
Row Spacing (In.)		24	36	36	28	28	24
				Yield Rank			
Harosoy	3	3	8	1	4	2	4
Hawkeye	7	7	4	5	6	8	7
A5-5515-2	4	5	6	2	1	4	2
A5-5629-4	2	2	1	4	3	1	5
C1273	1	1	3	7	5	5	3
U6-N171	6	8	2	3	8	7	6
U7-6804	5	4	5	6	7	3	1
W7-2420	8	6	7	8	1	6	8
	Mean of 13 Tests			Maturity			
Harosoy	-2.0	-4	+2	-3	-1	0	0
Hawkeye	0	0	0	0	0	0	0
A5-5515-2	+2.2	+2	+2	0	+2	+ 4	+1
A5-5629-4	+0.8	0	-1	0	-1	+ 2	+1
C1273	+0.8	+2	+4	0	+2	0	0
U6-N171	+1.5	+3	+2	+1	+2	+ 1	+1
U7-6804	-3.2	-3	0	+1	-2	0	-1
W7-2420	-1.4	-2	+1	+2	-2	- 1	-1
Blackhawk	-6.6	-3	-8	-5	-7	- 4	0
Ford	+6.6	+2	+8	+5	+9	+15	+8
Date planted	5-21	5-23	6-1	5-18	5-21	5-10	5-28
Hawkeye matured	9-24	10-8	10-2	9-16	9-15	9-13	10-16
Days to mature	126	138	123	121	117	126	141

Table 45. (Continued)

Strain	Lafayette Ind.	Madison Wis.	Urbana Ill.	Kanawha Iowa	Ames Iowa	Columbia Mo.	Centerville S.D.
Harosoy	45.9	37.2	53.7	40.4	34.4	33.1	46.3
Hawkeye	42.9	37.9	40.5	31.6	32.0	30.2	47.9
A5-5515-2	45.7	37.6	50.4	36.6	33.2	31.2	41.7
A5-5629-4	44.3	35.0	52.7	34.2	30.3	37.3	47.8
C1273	44.7	37.4	49.7	43.2	39.3	35.5	48.7
U6-N171	40.8	34.9	42.8	34.6	34.4	33.8	46.5
U7-6804	40.4	35.5	54.1	39.1	32.2	22.4	49.9
W7-2420	38.9	38.1	42.2	31.3	32.3	25.5	51.0
Coef. of Var. (%)	6.8	5.5	6.0	10.8	7.1	11.8	--
L.S.D. (5%)	NS	NS	6.8	9.3	5.6	NS	--
Row Spacing (In.)	38	36	40	40	40	38	42
	Yield Rank						
Harosoy	1	5	2	1	2	4	
Hawkeye	5	2	8	7	7	6	7
A5-5515-2	2	3	4	4	4	5	6
A5-5629-4	4	7	3	6	3	1	5
C1273	3	4	5	1	1	2	3
U6-N171	6	8	6	5	2	3	4
U7-6804	7	6	1	3	6	8	2
W7-2420	8	1	7	6	5	7	1
	Maturity						
Harosoy	-4	- 3	-3	-6	- 4	- 3	-3
Hawkeye	0	0	0	0	0	0	0
A5-5515-2	+3	+ 1	+2	+2	+ 4	+ 3	+4
A5-5629-4	+1	+ 1	+2	0	0	+ 3	+1
C1273	0	+ 1	-1	+3	0	+ 3	+3
U6-N171	+2	0	+1	0	+ 2	+ 3	+4
U7-6804	-4	-10	-6	-8	- 4	- 6	-7
W7-2420	0	- 8	-2	-4	- 2	0	+1
Blackhawk	-6	-11	-7	-8	-13	-12	-6
Ford	+5	+ 9	+4	+3	+ 5	+ 3	+4
Date planted	5-18	5-16	5-15	5-22	5-18	5-28	5-11
Hawkeye matured	9-10	10-3	9-10	10-4	9-22	9-11	10-3
Days to mature	115	140	118	135	127	106	145

UNIFORM TEST III - 1962

Strain	Originating Agency	Origin	Generation Composited
Ford	Iowa A.E.S. & U.S.R.S.L.	Lincoln (2) x Richland	F_9
Shelby	Ill. A.E.S. & U.S.R.S.L.	Lincoln (2) x Richland	F_8
L5	Ill. A.E.S. & U.S.R.S.L.	Shelby (6) x F_5 (L49-4091 x Shelby)	F_1
SL2	Ill. and Purdue A.E.S. & U.S.R.S.L.	L5 x F_2 [Shelby (4) x (Mukden x Shelby)]	F_1
C1128	Purdue A.E.S. & U.S.R.S.L.	Wabash x Hawkeye	F_6
L4	Ill. A.E.S. & U.S.R.S.L.	F_2 [C1128 (6) x S54-1207] x F_2 [C1128 (6) x H21162]	F_1
C1212	Purdue A.E.S. & U.S.R.S.L.	LX1061-9-9 x Blackhawk	F_6
L57-2222	Ill. A.E.S. & U.S.R.S.L.	L49-4091 x Clark	F_5
L57-3033	Ill. A.E.S. & U.S.R.S.L.	Adams x L46-1503	F_5
L57-9775	Ill. A.E.S. & U.S.R.S.L.	Hawkeye x Lee	F_6

Identification of Parent Strains

H21162 Phytophthora-resistant sel. from Monroe x Lincoln.
LX1061-9-9 F_7 line from Lincoln x Ogden; from same F_4 line as Kent.
L46-1503 F_5 line from Lincoln (2) x Richland.
L49-4091 Pustule-resistant F_4 line from L44-1219 x (Lincoln x CNS). L44-1219 is an F_3 line from Lincoln (2) x Richland.
S54-1207 Pustule-resistant sel. from Hawkeye x (L49-4091 x L46-2132-1). L46-2132-1 is an F_8 line from Lincoln (2) x Richland and is an F_5 sib of Clark and Shelby.

Data were reported from 20 locations in 1962 for the two checks and eight experimental strains in this test.

Two strains, L5 and SL2, were produced by backcrossing to Shelby and entered in yield tests for the first time in 1962. The first is pustule-resistant BC_6 and the second combines pustule-resistant BC_6 with Phytophthora-resistant BC_4. Both performed similarly to Shelby in 1962 although SL2 averaged a little low in yield. At Greenfield, Indiana, where common root rot occurred, SL2 outyielded Shelby and L5 by 10 bushels.

L4 was produced by backcrossing to C1128 and combines pustule-resistant BC_5 with Phytophthora-resistant BC_5. It was tested this year for the first time. C1128 was in Uniform Test II from 1954 to 1958 and was at one time being considered for release. It was entered in this test as a check for L4. The average performance of L4 was similar to C1128 although slightly lower in yield and at some locations it did not appear as uniform in plant type as did C1128.

C1212 and L57-2222 have been in this test two years and were in Preliminary Test III in 1960. Both have performed similarly to Shelby in most traits. C1212 is Phytophthora rot resistant. L57-2222 has yielded unusually well. It has averaged about four bushels higher than Shelby in each of the last four years. This yield

advantage was quite consistent; this year it was first or second in yield at 17 out of the 20 locations.

Two strains, L57-3033 and L57-9775, were entered from the 1961 Preliminary Test III. They yielded the same as Shelby this year and were similar in most other traits except that L57-3033 has an advantage in lodging resistance and higher oil content and L57-9775 is slightly earlier, higher in protein content, and pustule resistant.

Table 46. Summary of data for Uniform Test III, 1962.

Strain	Yield	Rank	Maturity[1]	Lodging	Height	Seed Quality	Seed Weight	Seed Composition	
								Protein	Oil
No. of Tests	17	17	15	16	17	12	13	9	9
Ford	38.0	2	-1.2	2.5	41	2.6	16.8	41.3	20.9
Shelby	37.5	4	0	2.4	42	2.3	16.0	40.8	21.3
L5	37.3	5	+0.2	2.5	42	2.5	15.5	40.5	21.5
SL2	35.9	9	+0.5	2.7	43	2.7	15.4	40.4	21.1
C1128	36.0	8	-2.3	2.3	42	2.4	16.4	40.2	22.3
L4	35.0	10	-2.6	2.5	42	2.5	15.4	39.6	22.2
C1212	37.1	7	+1.5	2.6	42	2.7	17.0	41.7	21.7
L57-2222	42.1	1	+1.7	2.6	41	2.7	17.5	41.6	21.1
L57-3033	37.2	6	+0.4	1.8	39	2.4	16.9	40.1	22.4
L57-9775	37.7	3	-1.6	2.3	39	2.5	19.8	42.7	20.8

[1]Days earlier (-) or later (+) than Shelby which matured September 20, 121 days after planting. Clark (Group IV) matured +11.0.

Table 47. Disease data for Uniform Test III, 1962.

Strain	Bacterial Blight		Bacterial Pustule		Brown Stem Rot	Phytophthora Rot	Pod & Stem Blight	Downy Mildew		Frogeye Ind.		Purple Stain	
	Ill.	Ia.	Ill.	Ia.	Ill.	Ind.	Del.	Ind.	Del.	R1	R2[2]	Ind.	Del.
	a[1]	a	a	a	n[1]	a	n	n	n	a	a	n	n
Ford	2	3	3	3	4	S	2.8	2.8	3.5	R	S	3	2.0
Shelby	2	3	4	3	4	S	3.5	3.0	3.8	R	S	3	2.0
L5	3	3	2	1	4	S	3.5	3.0	4.1	R	S		2.0
SL2	3	3	1	1	4	R	3.5	3.3	4.3	R	S		2.0
C1128	2	3	4	3	4	S	1.2	2.5	3.8	R	S		1.2
L4	1	3	1	3	4	R	1.5	2.8	3.8	R	S		1.8
C1212	3	3	3	3	4	R	2.8	2.5	3.8	S	S	3	2.5
L57-2222	2	3	1	1	4	S	3.2	3.3	3.8	R	R	2	1.8
L57-3033	2	3	4	4	4	S	1.5	2.8	3.5	-	S		1.8
L57-9775	4	3	2	1	4	S	2.0	2.5	3.5	-	S	3	1.8

[1]a = artificial inoculation; n = natural infection.
[2]R1 = Race 1; R2 = Race 2.

Table 48. Yield and yield rank for Uniform Test III, 1962.

Strain	Mean of 17 Tests	Free-hold N.J.	George-town Del.	Hoyt-ville Ohio	Woos-ter Ohio	Co-lum-bus Ohio	Bluff-ton Ind.[1]	Lafa-yette Ind.	Green-field Ind.	Wor-thing-ton Ind.
		*							*	
Ford	38.0	39.6	31.2	20.9	20.8	33.9	43.6	40.9	29.4	42.0
Shelby	37.5	41.7	29.2	20.3	21.8	33.6	38.9	40.6	32.1	44.4
L5	37.3	42.6	29.8	17.5	20.1	31.6	39.7	41.6	31.5	44.8
SL2	35.9	37.0	26.2	18.5	20.3	33.7	38.1	37.0	42.7	40.5
C1128	36.0	39.6	29.6	19.7	23.6	29.3	42.1	41.2	35.9	42.8
L4	35.0	39.6	29.5	18.4	20.4	29.9	40.9	37.5	36.7	37.2
C1212	37.1	39.7	34.2	22.4	23.5	31.0	43.3	41.9	46.1	40.9
L57-2222	42.1	45.5	32.0	26.0	27.3	35.8	46.7	45.7	44.2	53.1
L57-3033	37.2	46.4	33.3	20.9	24.9	28.1	41.1	42.6	30.6	53.3
L57-9775	37.7	40.6	35.5	21.4	26.0	30.1	44.3	43.3	37.5	39.3
C.V. (%)		25.0	7.8	16.6	9.8	10.9	9.5	6.2	8.6	10.5
L.S.D. (5%)		4.5	3.5	NS	3.3	NS	NS	3.8	4.6	6.8
Row Sp. (In.)		32	36	36	28	28	38	38	38	38

	Yield Rank									
		*							*	
Ford	2	7	5	4	7	2	3	7	10	6
Shelby	4	4	9	6	6	4	9	8	7	4
L5	5	3	6	10	10	5	8	5	8	3
SL2	9	10	10	8	9	3	10	10	3	8
C1128	8	7	7	7	4	9	5	6	6	5
L4	10	7	8	9	8	8	7	9	5	10
C1212	7	6	2	2	5	6	4	4	1	7
L57-2222	1	2	4	1	1	1	1	1	2	2
L57-3033	6	1	3	4	3	10	6	3	9	1
L57-9775	3	5	1	3	2	7	2	2	4	9

*Not included in the mean.
[1]Three replications.
[2]Irrigated.

Table 48. (Continued)

Strain	Urbana Ill.	Girard Ill.	Edgewood Ill.	Eldorado Ill.	Carbondale Ill.	Ames Iowa	Ottumwa Iowa	Columbia Mo.	Lincoln Nebr.[2]	Manhattan Kans.	Manhattan Kans.[2] *
Ford	50.5	46.4	40.2	43.8	32.1	41.0	48.5	32.2	50.7	26.5	39.1
Shelby	49.9	50.0	35.5	45.9	33.0	37.7	43.3	34.7	49.5	29.1	40.9
L5	51.1	50.6	37.2	45.6	31.0	39.4	45.3	33.7	47.4	27.2	44.6
SL2	46.0	49.6	37.6	41.3	31.7	38.9	40.3	33.2	46.6	30.2	45.4
C1128	47.6	47.4	35.9	42.1	27.5	37.8	42.5	31.8	41.0	29.5	41.4
L4	46.5	46.6	40.3	42.3	27.9	36.1	38.3	31.5	43.9	28.6	39.6
C1212	52.3	47.8	37.0	41.1	26.3	36.4	41.1	37.7	42.1	31.5	42.7
L57-2222	55.5	54.2	43.3	56.6	32.3	40.1	45.0	35.7	48.5	37.8	48.0
L57-3033	53.5	40.5	36.8	42.9	29.4	36.3	44.0	32.6	46.7	26.2	35.6
L57-9775	51.9	49.2	43.6	47.3	28.6	37.1	42.9	33.0	36.0	31.7	43.5
C.V. (%)	6.5	6.0	9.6	8.0	--	5.7	9.3	6.7	12.1	13.8	8.0
L.S.D. (5%)	4.7	4.2	NS	5.2	--	3.0	5.4	3.2	7.9	6.0	4.9
Row Sp. (In.)	40	38	37	36	40	40	40	38	40	40	36

	Yield Rank										
											*
Ford	6	9	4	5	3	1	1	8	1	9	9
Shelby	7	3	10	3	1	6	5	3	2	6	7
L5	5	2	6	4	5	3	2	4	4	8	3
SL2	10	4	5	9	4	4	9	5	6	4	2
C1128	8	7	9	8	9	5	7	9	9	5	6
L4	9	8	3	7	8	10	10	10	7	7	8
C1212	3	6	7	10	10	8	8	1	8	3	5
L57-2222	1	1	2	1	2	2	3	2	3	1	1
L57-3033	2	10	8	6	6	9	4	7	5	10	10
L57-9775	4	5	1	2	7	7	6	6	10	2	4

Table 49. Maturity, days earlier (-) or later (+) than Shelby, and lodging for Uniform Test III, 1962.

Strain	Mean of 15 Tests	Free-hold N.J.	George-town Del.	Hoyt-ville Ohio	Woos-ter Ohio	Co-lum-bus Ohio	Bluff-ton Ind.	Lafa-yette Ind.	Green-field Ind.	Wor-thing-ton Ind.
		*		*	*				*	
Ford	- 1.2	-6	0	-1	-1	0	0	-1	+ 3	0
Shelby	0	0	0	0	0	0	0	0	0	0
L5	+ 0.2	-1	0	-1	0	0	-1	0	+ 4	0
SL2	+ 0.5	+2	+1	0	+1	+ 1	0	+1	+ 3	0
C1128	- 2.3	0	0	-3	-1	- 1	+2	-2	0	- 4
L4	- 2.6	0	-1	-3	-1	- 1	+1	-2	+ 3	- 3
C1212	+ 1.5	+3	+1	-2	-2	0	+1	+2	+ 8	0
L57-2222	+ 1.7	-6	+1	-1	-1	- 1	0	+3	+ 9	+12
L57-3033	+ 0.4	+2	0	-4	-1	+ 4	+1	-1	+ 7	+11
L57-9775	- 1.6	0	-1	-3	-2	0	0	-2	+ 7	0
Clark	+11.0	+3	+8	--	--	+21	+5	+8	+12	+12
Date planted		5-22	5-30	5-29	5-18	5-21	5-10	5-21	5-18	5-17	5-24
Shelby matured		9-20	10-8	9-13	9-25	9-29	9-28	9-30	9-16	9-20	9-18
Days to mature		121	131	107	130	131	141	132	121	126	117

	Mean of 16 Tests	Lodging								
		*			*				*	
Ford	2.5	3.0	1.8	2.5	1.0	1.0	4.0	2.8	2.0	3.3
Shelby	2.4	3.0	2.1	2.2	1.0	1.2	3.7	3.0	2.5	2.8
L5	2.5	3.0	2.5	2.5	1.0	1.2	3.7	3.0	2.5	2.8
SL2	2.7	2.0	2.3	2.5	1.0	1.7	3.7	3.0	2.0	3.0
C1128	2.3	2.0	1.3	2.7	1.0	1.5	3.0	2.5	2.0	3.0
L4	2.5	3.0	1.8	2.7	1.0	1.2	3.0	3.0	2.0	3.5
C1212	2.6	2.0	1.5	3.2	1.0	1.5	3.3	2.3	2.0	4.0
L57-2222	2.6	3.0	1.9	2.7	1.0	1.5	4.0	3.0	2.0	3.0
L57-3033	1.8	2.0	1.3	1.7	1.0	1.2	2.0	2.0	1.0	1.5
L57-9775	2.3	2.0	1.4	2.7	1.0	1.5	3.0	2.0	1.5	3.3

*Not included in the mean.
[1]Irrigated.

Table 49. (Continued)

Strain	Urbana Ill.	Girard Ill.	Edgewood Ill.	Eldorado Ill.	Carbondale Ill.	Ames Iowa	Ottumwa Iowa	Columbia Mo.	Lincoln Nebr.[1]	Manhattan Kans.	Manhattan Kans.[1] *
Ford	-1	- 3	-3	- 1	- 2	-2	-2	- 3	- 1	+ 1	- 3
Shelby	0	0	0	0	0	0	0	0	0	0	0
L5	+1	0	0	+ 1	+ 1	+1	0	- 2	0	+ 2	+ 2
SL2	+1	0	+1	+ 1	0	+1	0	- 2	0	+ 2	+ 4
C1128	-2	- 3	-3	- 4	- 6	-5	-4	- 3	- 2	+ 2	+ 3
L4	-1	- 4	-4	- 4	- 9	-4	-4	- 3	- 2	+ 2	+ 3
C1212	0	- 3	+1	0	+10	+4	0	+ 1	+ 2	+ 3	+ 4
L57-2222	+2	0	+2	+ 1	+ 3	+2	-2	- 3	+ 2	+ 3	+ 5
L57-3033	0	- 3	-2	- 1	- 4	0	-2	+ 1	0	+ 2	+ 5
L57-9775	-1	- 7	-2	- 1	- 7	-2	-4	+ 1	0	+ 2	+ 5
Clark	+8	+10	+6	+17	+11	+9	+5	+14	+10	+21	+15
Date planted	5-15	5-17	6-6	5-21	5-15	5-1	6-1	5-28	5-22	6-12	6-7
Shelby matured	9-20	9-14	9-21	9-7	9-3	9-24	9-28	9-20	9-30	9-24	9-29
Days to mature	128	120	107	109	111	146	119	115	131	104	114
	Lodging										
Ford	2.9	3.8	2.6	3.5	2.0	1.6	2.1	1.8	2.9	1.2	3.1
Shelby	3.1	3.3	2.9	3.3	1.5	1.6	2.1	2.0	2.7	1.5	3.0
L5	2.9	3.2	2.4	3.2	1.5	1.6	2.3	2.1	3.2	1.9	3.2
SL2	3.4	3.1	2.9	3.4	3.0	1.6	2.2	2.2	3.5	2.2	3.3
C1128	2.6	2.3	2.2	3.3	1.0	1.5	2.6	1.9	3.2	1.6	2.2
L4	3.0	2.5	2.8	3.3	1.0	1.6	3.0	2.0	3.4	1.9	2.8
C1212	2.8	2.9	3.5	3.6	1.5	1.6	2.7	2.0	3.7	2.0	2.4
L57-2222	3.0	3.5	2.8	3.4	2.0	1.6	2.6	2.2	3.1	2.0	3.5
L57-3033	2.2	3.5	2.0	2.9	1.0	1.3	1.5	1.7	2.0	1.1	2.0
L57-9775	2.9	2.7	2.6	2.9	1.0	1.6	2.6	1.7	3.9	1.3	2.4

Table 50. Plant height and seed quality for Uniform Test III, 1962.

Strain	Mean of 17 Tests	Free-hold N.J.	George-town Del.	Hoyt-ville Ohio	Woos-ter Ohio	Co-lum-bus Ohio	Bluff-ton Ind.	Lafa-yette Ind.	Green-field Ind.	Wor-thing-ton Ind.
		*							*	
Ford	41	34	34	37	28	38	45	46	38	45
Shelby	42	34	37	38	27	38	44	47	43	45
L5	42	35	36	37	27	39	40	47	44	44
SL2	43	35	38	38	27	40	44	47	49	47
C1128	42	35	37	38	27	40	43	44	43	47
L4	42	35	36	39	26	39	45	47	44	45
C1212	42	36	36	38	27	38	44	49	47	45
L57-2222	41	34	36	36	25	37	41	48	47	46
L57-3033	39	35	34	38	26	38	40	45	41	45
L57-9775	39	35	34	38	27	37	39	41	39	39
	Mean of 12 Tests	Seed Quality								
		*		*	*				*	
Ford	2.6	2.0	3.5	1.0	1.0	2.0	1.0	2.0	2.0	4.0
Shelby	2.3	2.0	2.5	1.0	1.0	2.0	1.0	2.0	1.5	3.0
L5	2.5	1.0	2.5	1.0	1.0	2.0	1.0	2.5	2.0	4.0
SL2	2.7	1.0	3.0	1.0	1.0	2.5	1.0	2.0	1.5	4.0
C1128	2.4	1.0	2.5	1.0	1.0	2.0	1.0	2.0	1.5	3.5
L4	2.5	2.0	2.2	1.0	1.0	2.0	1.0	2.0	2.0	4.0
C1212	2.7	1.0	2.5	1.0	1.0	2.2	1.5	2.0	1.5	3.5
L57-2222	2.7	2.0	3.2	1.0	1.0	2.5	1.0	1.5	2.0	3.5
L57-3033	2.4	2.0	1.8	1.0	1.0	2.0	1.0	2.0	1.5	4.0
L57-9775	2.5	1.0	1.8	1.0	1.0	1.5	1.0	2.0	2.0	3.0

*Not included in the mean.
[1]Irrigated.

Table 50. (Continued)

Strain	Urbana Ill.	Girard Ill.	Edgewood Ill.	Eldorado Ill.	Carbondale Ill.	Ames Iowa	Ottumwa Iowa	Columbia Mo.	Lincoln Nebr.[1]	Manhattan Kans.	Manhattan Kans.[1] *
Ford	47	47	38	44	36	46	45	32	47	38	44
Shelby	50	48	40	47	37	46	48	33	50	38	44
L5	50	49	41	47	36	46	46	34	50	39	45
SL2	52	52	43	49	39	47	49	33	52	41	45
C1128	47	51	39	45	39	44	45	32	48	40	46
L4	49	51	40	44	38	44	45	33	51	43	45
C1212	47	50	40	43	36	47	44	33	48	41	46
L57-2222	48	48	40	47	36	45	46	31	49	38	46
L57-3033	47	43	37	42	33	45	44	30	48	36	46
L57-9775	44	46	39	44	35	40	44	30	45	39	48

	Seed Quality										
						*	*				*
Ford	2.6	2.6	3.0	3.0	3.5	1.0	1.0		2.1	1.6	1.3
Shelby	2.0	2.5	3.4	2.6	3.0	1.0	1.0		2.0	1.3	1.0
L5	2.4	3.4	3.4	3.1	2.5	1.0	1.0		1.5	1.3	1.5
SL2	2.3	3.5	3.8	3.5	3.0	1.0	1.0		2.1	1.7	1.0
C1128	2.8	2.3	2.5	2.3	4.0	1.0	1.0		2.5	1.3	1.5
L4	3.3	2.3	2.6	2.3	3.5	1.0	1.0		3.0	1.3	1.3
C1212	2.6	2.8	3.4	3.3	4.0	1.0	1.0		3.0	1.5	1.5
L57-2222	2.5	3.4	3.1	3.6	3.0	1.0	1.0		3.5	1.2	1.0
L57-3033	1.9	2.6	2.9	2.5	3.5	1.0	1.0		2.8	1.2	1.0
L57-9775	3.3	3.4	3.3	2.8	3.5	1.0	1.0		2.6	1.2	1.0

Table 51. Percentages of protein and oil for Uniform Test III, 1962.

Strain	Mean of 9 Tests	Free-hold N.J. *	George-town Del.	Co-lum-bus Ohio	Lafa-yette Ind.	Wor-thing-ton Ind.	Ur-bana Ill.	Gi-rard Ill.	Ames Iowa	Lin-coln Nebr.[1]	Man-hat-tan Kans.
Ford	41.3	42.9	44.7	42.5	40.6	41.9	40.7	42.3	40.3	39.8	39.2
Shelby	40.8	41.6	44.5	41.6	39.5	41.0	40.5	41.9	39.8	39.4	38.9
L5	40.5	41.2	43.8	41.2	38.9	41.1	40.9	41.5	39.4	38.9	38.6
SL2	40.4	41.3	44.3	41.3	39.0	41.1	40.8	41.2	38.7	38.5	38.9
C1128	40.2	41.0	43.0	41.9	40.4	39.5	40.4	40.8	38.8	38.7	38.5
L4	39.6	40.2	42.4	40.9	39.1	39.6	39.7	41.1	38.2	37.2	37.9
C1212	41.7	42.6	44.4	43.3	41.2	41.5	40.9	43.0	41.4	40.1	39.5
L57-2222	41.6	42.7	44.2	42.2	40.3	42.5	42.4	42.6	40.7	40.1	39.7
L57-3033	40.1	41.2	42.6	41.5	40.5	38.9	39.4	41.5	39.6	39.4	37.5
L57-9775	42.7	43.8	44.4	44.2	42.4	42.3	43.1	44.3	42.3	41.0	40.5
	Mean of 9 Tests	Percentage of Oil									
Ford	20.9	19.8 *	19.7	19.7	20.8	21.3	21.1	21.1	20.8	21.3	22.1
Shelby	21.3	20.1	19.8	20.6	21.8	21.4	21.2	21.5	21.9	21.4	22.4
L5	21.5	19.9	19.8	20.7	21.7	21.0	22.7	22.2	21.6	21.5	22.5
SL2	21.1	19.4	19.5	20.5	22.2	21.2	20.8	21.3	21.2	20.8	22.3
C1128	22.3	20.9	21.2	21.6	22.7	22.1	22.7	22.8	22.6	21.4	23.2
L4	22.2	20.9	21.3	21.3	22.8	21.6	22.1	22.9	22.8	22.2	23.2
C1212	21.7	20.6	21.2	20.3	22.5	21.7	21.8	22.3	21.0	21.6	22.6
L57-2222	21.1	20.2	19.5	18.5	22.0	21.1	22.2	21.7	20.9	21.1	22.7
L57-3033	22.4	20.9	21.6	22.3	22.3	22.5	22.5	22.3	22.4	22.0	23.8
L57-9775	20.8	19.4	20.3	19.8	20.9	20.6	21.2	20.4	22.0	20.3	21.4

*Not included in the mean.
[1]Irrigated.

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Strain	Originating Agency	Origin	Generation Composited
Ford	Iowa A.E.S. & U.S.R.S.L.	Lincoln (2) x Richland	F_9
Shelby	Ill. A.E.S. & U.S.R.S.L.	Lincoln (2) x Richland	F_8
A9-1144	Iowa A.E.S. & U.S.R.S.L.	Clark x Chippewa	F_4
C1276	Purdue A.E.S. & U.S.R.S.L.	Mandarin (Ottawa) x Clark	F_6
C1291	Purdue A.E.S. & U.S.R.S.L.	Mandarin (Ottawa) x C1069	F_6
CX314-50	Purdue A.E.S. & U.S.R.S.L.	Ford x Shelby	F_3
CX314-56	Purdue A.E.S. & U.S.R.S.L.	Ford x Shelby	F_3
CX314-81	Purdue A.E.S. & U.S.R.S.L.	Ford x Shelby	F_3
CX314-90	Purdue A.E.S. & U.S.R.S.L.	Ford x Shelby	F_3
CX314-92	Purdue A.E.S. & U.S.R.S.L.	Ford x Shelby	F_3
S9-2501	Mo. A.E.S. & U.S.R.S.L.	Radiated Clark	R_5
S9-2504	Mo. A.E.S. & U.S.R.S.L.	Radiated Clark	R_5
UD470	Del. A.E.S. & U.S.R.S.L.	Adams x F.C. 33243	F_6
UD475	Del. A.E.S. & U.S.R.S.L.	Adams x F.C. 33243	F_6
UD485	Del. A.E.S. & U.S.R.S.L.	Adams x F.C. 33243	F_6

Identification of Parent Strains

C1069	F_7 line from Lincoln x Ogden; from same F_4 line as Kent.
F.C. 33243	Rogue in Lincoln, selected by H. J. Anderson, Calamus, Iowa; resistant to root knot nematode.

Data are presented from 13 locations for the two check varieties and 13 new experimental strains in this test.

The two strains, S9-2501 and S9-2504, are of interest since they (along with three other strains in Preliminary Tests II and IV) represent the first entries in regional tests selected from radiated material. Both strains are distinctly earlier than Clark. S9-2504 averaged highest in yield in the test.

The five selections from Ford x Shelby were similar to the parents in performance although two of them outyielded the higher-yielding parent.

The three root knot-resistant UD strains were consistently low in yield. UD485 matured too early for this group.

C1276 and C1291 outyielded Shelby but were appreciably later in maturity.

Table 52. Summary of data for Uniform Preliminary Test III, 1962.

Strain	Yield	Rank	Maturity[1]	Lodging	Height	Seed Quality	Seed Weight	Seed Composition	
								Protein	Oil
No. of Tests	12	12	11	10	12	9	7	7	7
Ford	37.2	12	-0.5	2.4	41	2.3	17.1	40.7	21.1
Shelby	38.7	7	0	2.3	42	2.2	16.3	40.2	21.3
A9-1144	38.4	9	+0.5	2.4	38	2.2	16.1	40.7	20.8
C1276	40.2	2	+4.4	2.0	37	2.0	20.1	42.1	20.9
C1291	39.8	3	+5.5	2.4	43	2.3	18.7	39.9	21.2
CX314-50	38.6	8	-0.1	2.0	43	2.1	16.5	40.4	20.9
CX314-56	38.9	5	-1.4	2.3	42	2.2	17.0	40.4	20.9
CX314-81	39.3	4	+0.5	2.3	43	2.0	16.7	40.4	21.1
CX314-90	38.1	10	+0.5	2.2	43	2.3	17.6	40.7	21.2
CX314-92	38.8	6	+0.7	2.2	43	2.3	16.7	39.6	21.3
S9-2501	37.3	11	-0.5	2.3	43	2.3	16.3	40.6	21.0
S9-2504	40.6	1	+3.1	2.2	41	2.1	16.9	40.7	20.8
UD470	35.0	13	+4.7	2.6	42	2.1	16.0	41.3	20.6
UD475	34.7	14	+2.4	2.2	39	2.6	16.3	38.6	22.2
UD485	26.8	15	-6.9	2.7	37	2.6	16.3	42.0	20.8

[1]Days earlier (-) or later (+) than Shelby which matured September 23, 123 days after planting. Clark (Group IV) matured +9.5.

Table 53. Disease data for Uniform Preliminary Test III, 1962.

Strain	Bacterial Blight	Bacterial Pustule	Brown Stem Rot	Phytophthora Rot	Pod & Stem Blight	Downy Mildew		Frogeye Ind.		Purple Stain	
	Ill.	Ill.	Ill.	Ind.	Del.	Ind.	Del.	R1	R2[2]	Ind.	Del.
	a[1]	a	n[1]	a	n	n	n	a	a	n	n
Ford	2	3	4	S	2.8	2.0	3.5	R	S	3	2.0
Shelby	2	4	4	S	3.5	3.0	3.8	R	S	3	2.0
A9-1144	1	4	4	S	3.5	2.5	4.0	-	S		2.0
C1276	3	4	4	S		3.0	3.0	R	S	3	1.5
C1291	4	3	4	S	1.5	3.0	3.0	R	R	2	1.5
CX314-50	2	4	4	S	3.0	2.5	4.0	R	S		2.0
CX314-56	2	4	4	S	3.0	3.0	3.8	R	S		2.0
CX314-81	3	4	4	S	3.5	3.0	3.3	R	S		2.5
CX314-90	3	4	4	S	3.0	2.5	4.0	R	S		2.0
CX314-92	3	5	4	S	3.0	2.5	4.0	R	S		2.0
S9-2501	3	4	4	S	4.0	2.0	4.0	-	S		1.0
S9-2504	3	3	4	S	3.0	3.0	4.0	-	S		2.0
UD470	3	3	4	S	1.0	2.5	4.2	-	S		1.0
UD475	4	3	4	S	1.0	1.5	3.8	-	S		2.0
UD485	4	3	4	S	3.0	2.5	3.0	-	S		1.5

[1]a = artificial inoculation; n = natural infection.
[2]R1 = Race 1; R2 = Race 2.

Table 54. Yield and yield rank for Uniform Preliminary Test III, 1962.

Strain	Mean of 12 Tests	George-town Del.	Hoyt-ville Ohio *	Woos-ter Ohio	Co-lum-bus Ohio	Lafa-yette Ind.	Wor-thing-ton Ind.	Ur-bana Ill.	Gi-rard Ill.	Ames Iowa	Ot-tum-wa Iowa	Co-lum-bia Mo.	Lin-coln Nebr.[1]	Man-hat-tan Kans.
Ford	37.2	29.0	25.7	21.6	31.6	43.5	44.4	49.4	46.6	35.2	46.2	29.9	40.9	28.3
Shelby	38.7	27.5	17.9	18.6	33.7	43.2	55.3	48.3	54.0	32.0	42.5	34.3	45.1	29.6
A9-1144	38.4	27.0	18.5	17.4	29.8	45.8	48.1	51.1	50.2	37.3	44.4	32.5	47.6	30.1
C1276	40.2	25.6	24.0	24.6	41.3	50.5	41.6	63.4	37.4	33.8	41.6	37.3	52.8	32.7
C1291	39.8	28.8	17.5	20.5	31.6	50.3	48.2	53.4	52.2	36.1	43.3	31.3	47.7	34.2
CX314-50	38.6	28.4	19.4	18.9	33.5	49.5	52.1	50.4	50.2	34.6	42.2	30.2	46.4	26.5
CX314-56	38.9	28.0	24.0	19.3	32.4	48.3	45.3	55.8	50.2	37.2	43.0	31.5	45.0	30.7
CX314-81	39.3	30.7	21.6	19.8	32.5	46.6	50.4	51.8	50.6	35.3	46.6	33.9	44.2	29.7
CX314-90	38.1	30.4	28.9	18.7	37.3	48.3	44.0	48.3	47.0	32.6	41.8	30.4	46.4	31.5
CX314-92	38.8	31.6	18.2	19.3	33.3	45.9	44.7	54.1	53.8	32.6	41.4	31.5	45.7	31.3
S9-2501	37.3	25.4	17.6	18.3	29.9	39.8	54.3	48.3	49.9	37.1	38.7	32.5	47.2	26.5
S9-2504	40.6	26.2	16.5	20.6	36.7	50.4	51.6	53.9	48.4	37.5	41.0	35.2	51.2	34.5
UD470	35.0	21.5	21.4	16.6	36.5	46.2	36.6	51.9	39.0	31.0	34.0	28.2	42.8	35.6
UD475	34.7	28.0	16.7	16.0	28.3	45.8	34.3	42.2	41.2	32.5	39.0	28.3	54.4	26.3
UD485	26.8	23.6	20.2	16.0	23.3	33.1	27.3	37.2	37.7	27.8	29.0	22.1	30.4	14.6
C.V.(%)		7.0	20.5	7.8	11.6	6.7	9.6	8.8	7.4	4.2	7.3	8.1	8.7	10.5
L.S.D.(5%)		4.1	NS	3.2	8.1	6.5	9.2	9.5	7.6	3.1	6.4	5.5	8.6	6.3
Row Sp.(In.)		36	36	28	28	38	38	40	38	40	40	38	40	40

	Yield Rank													
Ford	12	4	2	2	10	12	10	10	11	7	2	12	14	11
Shelby	7	9	11	10	5	13	1	11	1	13	6	3	10	10
A9-1144	9	10	9	12	13	10	7	8	5	2	3	5	5	8
C1276	2	12	3	1	1	1	12	1	15	9	9	1	2	4
C1291	3	5	13	4	10	3	6	5	3	5	4	9	4	3
CX314-50	8	6	8	8	6	4	3	9	5	8	7	11	7	12
CX314-56	5	7	3	6	9	5	8	2	5	3	5	7	11	7
CX314-81	4	2	5	5	8	7	5	7	4	6	1	4	12	9
CX314-90	10	3	1	9	2	5	11	11	10	10	8	10	7	5
CX314-92	6	1	10	6	7	9	9	3	2	10	10	7	9	6
S9-2501	11	13	12	11	12	14	2	11	8	4	13	5	6	12
S9-2504	1	11	15	3	3	2	4	4	9	1	11	2	3	2
UD470	13	15	6	13	4	8	13	6	13	14	14	14	13	1
UD475	14	7	14	14	14	10	14	14	12	12	12	13	1	14
UD485	15	14	7	14	15	15	15	15	14	15	15	15	15	15

*Not included in the mean.
[1]Irrigated.

Table 55. Maturity, days earlier (-) or later (+) than Shelby, for Uniform Preliminary Test III, 1962.

Strain	Mean of 11 Tests	Georgetown Del.	Hoytville Ohio *	Wooster Ohio *	Columbus Ohio	Lafayette Ind.	Worthington Ind.
Ford	-0.5	0	-1	-1	+ 1	+ 1	+ 1
Shelby	0	0	0	0	0	0	0
A9-1144	+0.5	+1	-1	-1	- 3	0	0
C1276	+4.4	+5	+7	+2	- 1	+ 6	+11
C1291	+5.5	+6	+4	+2	+ 3	+ 6	+13
CX314-50	-0.1	0	-1	0	- 1	+ 2	0
CX314-56	-1.4	0	+1	-1	- 4	0	0
CX314-81	+0.5	0	+1	-1	- 2	+ 3	+ 1
CX314-90	+0.5	0	+3	0	- 1	+ 3	0
CX314-92	+0.7	0	+1	+2	+ 2	+ 3	+ 2
S9-2501	-0.5	0	-1	-2	- 5	+ 2	0
S9-2504	+3.1	+1	+3	+1	+ 1	+ 4	+ 4
UD470	+4.7	+1	+1	-1	- 2	+ 5	+14
UD475	+2.4	+1	-2	-1	- 1	0	+13
UD485	-6.9	-5	-5	-3	-11	-10	+ 2
Clark	+9.5	+7	--	--	+ 9	+ 5	+12
Date planted	5-23	5-29	5-18	5-21	5-10	5-18	5-24
Shelby matured	9-23	9-14	9-24	9-28	10-10	9-19	9-18
Days to mature	123	108	129	130	153	124	117

*Not included in the mean.
[1]Irrigated.

Table 55. (Continued)

Strain	Urbana Ill.	Girard Ill.	Ames Iowa	Ottumwa Iowa	Columbia Mo.	Lincoln Nebr.[1]	Manhattan Kans.
Ford	+ 1	0	-2	-3	- 2	0	- 2
Shelby	0	0	0	0	0	0	0
A9-1144	0	- 1	+2	0	+ 5	+ 3	- 1
C1276	+ 2	+ 5	+4	+2	+10	+ 4	0
C1291	+ 6	+ 3	+4	+3	+ 9	+ 6	+ 2
CX314-50	- 1	- 1	0	0	0	- 1	+ 1
CX314-56	- 3	- 1	-2	-1	- 1	- 1	- 2
CX314-81	- 1	0	+2	-2	+ 1	+ 3	+ 1
CX314-90	+ 1	0	+2	0	0	+ 1	0
CX314-92	0	+ 1	+2	0	0	- 1	- 1
S9-2501	- 1	0	+2	-1	0	- 2	- 1
S9-2504	+ 2	+ 2	+5	+4	+ 7	+ 3	+ 1
UD470	+ 7	+ 4	+2	+2	+ 9	+ 7	+ 3
UD475	+ 7	- 1	+1	-2	+ 1	+ 5	+ 2
UD485	-14	-15	-5	-7	- 3	- 2	- 6
Clark	+ 5	+ 9	+5	+5	+16	+12	+19
Date planted	5-15	5-17	5-18	6-1	5-28	5-22	6-12
Shelby matured	9-23	9-15	9-28	9-28	9-18	9-28	9-26
Days to mature	131	121	133	119	113	129	106

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Strain	Originating Agency	Origin	Generation Composited
Bethel	Del. A.E.S. & U.S.R.S.L.	FC 33243 x Perry	F_5
Clark	Ill. A.E.S. & U.S.R.S.L.	Lincoln (2) x Richland	F_8
L6	Ill. A.E.S. & U.S.R.S.L.	L8 x L7	F_1
L7	Ill. A.E.S. & U.S.R.S.L.	Clark (3) x F_2 [Clark (4) x F_2 (Blackhawk x Clark)]	F_1
L8	Ill. A.E.S. & U.S.R.S.L.	Clark (5) x F_5 (L49-4091 x Clark)	F_1
Clark 63 (SL1)	Ill. and Mo. A.E.S. & U.S.R.S.L.	F_2 [Clark (4) x S54-1714] x F_1 [Clark (5) x F_2 (Blackhawk x Clark)]	F_1
SL1-H	Ill. and Mo. A.E.S. & U.S.R.S.L.	Same as above	F_1
Kent	Purdue A.E.S. & U.S.R.S.L.	Lincoln x Ogden	F_7
C1220	Purdue A.E.S. & U.S.R.S.L.	LX1061-9-15 x Richland	F_6
C1266	Purdue A.E.S. & U.S.R.S.L.	Harosoy x C1079	F_6
C1268	Purdue A.E.S. & U.S.R.S.L.	Harosoy x C1079	F_6
K646	Kansas A.E.S. & U.S.R.S.L.	Unknown*	
K701	Kansas A.E.S. & U.S.R.S.L.	Unknown*	
L57-0034	Ill. A.E.S. & U.S.R.S.L.	L46-2132 x Adams	F_6
L57-2324	Ill. A.E.S. & U.S.R.S.L.	L49-4091 x Clark	F_5
L57-3104	Ill. A.E.S. & U.S.R.S.L.	C985 x Perry	F_5
Md59-285	Md. A.E.S. & U.S.R.S.L.	Lincoln x C985	F_6

Identification of Parent Strains

C985	F_4 line from Lincoln x Ogden, progenitor of Kent.
C1079	F_7 line from C985.
FC 33243	Rogue in Lincoln, selected by H. J. Anderson, Calamus, Iowa; resistant to root knot.
LX1061-9-15	F_7 line from C985.
L46-2132	F_5 line from Lincoln (2) x Richland, progenitor of Clark and Shelby.
L49-4091	Pustule-resistant F_4 line from L44-1219 x (Lincoln x CNS). L44-1219 is an F_3 line from Lincoln (2) x Richland.
S54-1714	Pustule-resistant sel. from L49-4091 x Clark.

*Records destroyed by fire in 1957.

Data were reported from 14 locations in 1962 for the four varieties and 13 experimental strains.

Four of the strains, plus the newly released Clark 63, were derived by backcrossing to Clark and all were new entries except SL1-H. The four of these which have Phytophthora resistance averaged slightly lower in yield than Clark, while L8, which

has only pustule resistance, averaged a little higher. In other traits they were close to Clark except that L8 tended to be late.

L57-0034 has been in this test since 1960. In the past it has outyielded Clark, but this year the margin was very slight. C1220 and L57-2324 have each been in the test two years. C1220 yielded relatively poorly this year. In 1961 it equalled Clark's yield but this year averaged two bushels lower. L57-2324 outyielded Clark by about one bushel both years and, in addition, is pustule resistant.

The remaining six varieties were advanced from last year's Preliminary Test IV. C1266 topped the test in yield, had excellent lodging resistance, and apparently is somewhat resistant to downy mildew. C1268 and Md59-285 equalled Clark in yield and were better in both lodging and seed quality.

A description and outline of the history of the development of Clark 63 follows:

CLARK 63

Clark 63 was named and released in January 1963. Releasing states are Illinois, Indiana, Iowa, Kansas, Missouri, and Ohio. Clark 63, formerly strain SL1, is similar to Clark in all respects except for the addition from Blackhawk of a dominant gene for Phytophthora rot resistance and the addition from L49-4091 of a recessive gene (originally from CNS) for bacterial pustule resistance. Clark 63 was developed cooperatively with the backcrossing for pustule resistance done at Columbia, Missouri, and the backcrossing for Phytophthora resistance done at Urbana, Illinois. The details of its development are given below:

Columbia, Missouri

1954		BC_1	Cross of S4-1714 x Clark made. S4-1714 is a BP resistant F_6 line from L49-4091 x L46-2132-1 and was in Uniform Test IV in 1956. Its BP resistance traces through L49-4091 to CNS. L49-4091 is an F_4 line from the cross of an F_3 line of Lincoln (2) x Richland by the F_1 of Lincoln x CNS. L46-2132-1 is an F_5 plant from L46-2132 which is the F_5 line from which Clark and Shelby were selected.
1955		F_1BC_1	Two plants grown.
1956		F_2	Plants grown and harvested individually.
1957		F_3	About 200 F_3 lines grown, 2 lines crossed with L46-2132-A14 which is a selection made at Ames, Iowa, from L46-2132. L46-2132-A14 was tested in Uniform Test III in 1956 and Uniform Test IV in 1956-57 and performed similarly to Clark.
1957	Fall	F_1BC_2	Grown in greenhouse and crossed with L46-2132-A14.
1958	Spring	F_1BC_3	21 plants grown.

1958	Summer	F_2	BP-tested in greenhouse; about 40 plants transplanted to field; crossed with Clark.
1958	Fall	F_1BC_4	Plants grown and 20 F_2 seeds sent to Urbana.
[1959	Spring		Crossed with BC_5 PR-resistant plants at Urbana.]
1959	Summer	F_1(BP + PR)	9 plants grown from seeds sent from Urbana.
1959-60	Winter	F_2	Plants grown and tested for PR and BP; resistant plants progeny tested for PR.
1960	Summer	F_3	8 F_3 lines space planted in field (8-12 inches apart) and harvested.
1960-61	Winter	F_4	BP test showed that 2 lines were not resistant; these were discarded, leaving 6 uniformly resistant F_3 lines from 2 F_1 plants.
			Urbana, Illinois
1951			Cross of Blackhawk x Clark made at Ames, Iowa.
1952		F_1	Plants grown at Ames; seeds sent to Urbana in April 1956.
1956	Apr-Aug	F_2	Seedlings PR inoculated; survivors (4 plants) crossed onto Clark.
1956-57	Oct-Mar	F_1BC_1	Seedlings PR inoculated; survivors (5) crossed onto Clark.
1957	Apr-Sep	F_1BC_2	Seedlings PR inoculated; survivors (4) crossed onto Clark.
1957-58	Oct-Feb	F_1BC_3	Seedlings PR inoculated; survivors (8) crossed onto Clark.
1958	Feb-Jun	F_1BC_4	Seedlings PR inoculated; survivors (9 plants, designated L58g-122) crossed onto Clark. (A bulk of 2 resistant F_3 lines from this BC_4 was tested as L58g-122R in Preliminary Test IV in 1960 and in Uniform Test IV in 1961.)
1959	Mar-Jun	F_1BC_5(PR)	Three seedlings PR inoculated; 1 survived and was designated L59g-182.
		F_2BC_4(BP)	Twenty seedlings grown from seeds sent from Columbia and BP inoculated; 15 infected plants rogued leaving 5 resistant plants, designated L59g-188. Cross of L59g-182 x -188 made, 11 seeds sent to Columbia, 14 kept at Urbana.
1959	Jun-Oct	F_1(BP + PR)	14 seedlings PR inoculated in field (159-2823). 9 survived.

1959-60	Feb-Jun	F_2	Seedlings from L59-2823 BP inoculated, infected plants rogued (L60g-303).
1960	Jun-Oct	F_3	30 F_3 lines from L60g-303 grown in 8-foot rows and BP inoculated; 21 uniformly resistant lines found (L60-241 to -270).
1960-61	Dec-Jan	F_4	21 BP resistant lines inoculated with PR, 8 lines found to be uniformly PR resistant (10.2 pounds of seeds).

Columbia and Urbana

1961	May-Sep	F_4	8 F_3 lines produced at Urbana and 6 produced at Columbia were yield-tested in rod-row plots with four replications at Urbana and Columbia; differences in yield were not statistically significant. The 8 Urbana lines and 2 of the Columbia ones were rechecked for pustule reaction and one Urbana line was found to be segregating and was discarded. The lines were increased and harvested individually at Urbana and Columbia. A composite of PR-segregating, BP-resistant lines from Urbana was tested in Uniform Test IV as SL1-H. Another composite of segregating lines was tested in Uniform Group IVS as SL-1.
1962			Seeds from 7 Urbana lines and 6 Columbia lines composited and increased in 6 states as SL1. SL1 tested in Uniform Test IV and IVS.

Increase and distribution of Clark 63:

	1962 Production	Distribution	1963
Illinois	26 bus.	31 bus.	1,834 bus.
Missouri	64	28	2,000
Indiana		13	1,500
Iowa		2	120
Kansas		13	400
Ohio		2	100
Total	90 bus.	89 bus.	5,954 bus.

Table 56. Summary of data for Uniform Test IV, 1962.

Strain	Yield	Rank	Maturity[1]	Lodging	Height	Seed Quality	Seed Weight	Seed Composition	
								Protein	Oil
No. of Tests	10	10	10	10	10	10	6	7	7
Bethel	35.1	16	+13.1	2.1	42	2.3	16.5	41.1	20.6
Clark	37.4	8	0	2.2	40	2.5	16.9	41.8	20.9
L6	36.3	12	+ 1.1	2.4	40	2.8	16.1	41.8	20.5
L7	35.4	15	+ 0.1	2.4	40	2.7	16.4	42.0	21.0
L8	37.7	6	+ 1.8	2.1	39	2.6	16.3	41.8	20.9
Clark 63	36.8	10	+ 0.6	2.2	41	2.6	15.9	41.9	20.7
SL1-H	36.5	11	+ 0.4	2.2	40	2.6	15.9	41.9	20.8
Kent	38.7	2	+ 8.6	2.1	39	2.6	18.2	41.8	20.9
C1220	35.1	16	+ 7.3	2.4	44	2.7	16.9	41.0	20.7
C1266	40.7	1	+ 2.5	1.9	43	2.7	17.3	43.4	20.3
C1268	37.6	7	+ 5.6	1.8	40	2.2	16.6	42.1	20.5
K646	37.1	9	+ 7.2	2.4	43	2.6	16.4	41.9	20.5
K701	36.3	12	+ 3.0	1.9	38	2.7	16.6	40.9	21.8
L57-0034	37.8	4	+ 5.5	2.1	37	2.3	15.7	40.9	21.4
L57-2324	38.3	3	+ 0.8	2.1	38	3.0	16.6	41.9	21.3
L57-3104	35.6	14	+ 0.1	1.9	39	2.8	17.3	41.7	22.1
Md59-285	37.8	4	+ 4.8	1.7	37	2.2	16.3	42.0	21.1

[1]Days earlier (-) or later (+) than Clark which matured September 28, 124 days after planting.

Table 57. Disease data for Uniform Test IV, 1962.

Strain	Bacterial Blight		Bacterial Pustule		Brown Stem Rot	Phytophthora Rot	Pod & Stem Blight	Downy Mildew		Frogeye Ind.		Purple Stain	
	Ill.	Ia.	Ill.	Ia.	Ill.	Ind.	Del.	Ind.	Del.	R1	R2[2]	Ind.	Del.
	a[1]	a	a	a	n[1]	a	n	n	n	a	a	n	n
Bethel	4	3	4	4	4	S	2.0	3.0	4.3	R	S	2	2.0
Clark	2	3	4	3	4	S	3.5	3.0	3.8	R	S	3	2.0
L6	2	3	2	1	4	R	3.0	3.0	3.8	R	S		2.0
L7	2	3	4	2	4	R	3.0	3.0	3.6	R	S		1.5
L8	1	3	2		4	S	2.8	3.0	3.8	R	S		1.5
Clark 63	3	3	2	1	4	R	3.2	3.3	4.3	R	S		1.5
SL1-H	2	3	2	1	4	Seg.	3.2	3.0	4.4	R	S	3	1.2
Kent	3	3	2	3	4	S	2.0	2.5	1.1	R	R	3	3.0
C1220	3	4	3	3	4	S	2.3	2.5	1.9	R	R	2	2.8
C1266	2	3	3	3	4	S	1.8	2.3	1.0	R	Seg.	3	3.0
C1268	4	3	3	3	4	S	2.0	2.3	1.0	R	R	2	2.2
K646	2	3	3	3	4	S	2.0	3.5	3.9	--	Seg.		2.2
K701	1	3	4	3	4	S	2.0	3.0	4.3	--	S		2.2
L57-0034	2	3	4	3	4	S	2.0	2.8	3.5	R	S	2	2.5
L57-2324	4	3	2	3	4	S	2.8	2.3	4.3	R	S	3	2.5
L57-3104	4	4	3	3	4	S	2.5	3.0	4.1	R	R		2.0
Md59-285	4	3	4	4	4	S	2.2	3.3	4.3	Seg.	S		2.0

[1]a = artificial inoculation; n = natural infection.
[2]R1 = Race 1; R2 = Race 2.

Table 58. Yield for Uniform Test IV, 1962.

Strain	Mean of 10 Tests	Rank	Free-hold N.J. *	George-town Del.[1]	Co-lum-bus Ohio	Wor-thing-ton Ind.	Edge-wood Ill.	Eldo-rado Ill.
Bethel	35.1	16	36.7	23.8	30.6	44.4	26.8	46.2
Clark	37.4	8	35.6	24.4	30.7	45.7	37.8	51.9
L6	36.3	12	36.3	22.1	32.8	40.3	37.3	48.0
L7	35.4	15	35.9	21.5	29.6	37.5	35.7	51.6
L8	37.7	6	39.3	22.8	32.7	44.1	37.1	51.5
Clark 63	36.8	10	37.8	20.9	29.1	44.3	38.2	49.6
SL1-H	36.5	11	35.0	22.7	29.6	46.3	38.3	48.6
Kent	38.7	2	41.4	26.5	29.6	49.2	33.4	53.5
C1220	35.1	16	35.6	24.6	25.3	44.0	33.2	54.6
C1266	40.7	1	39.9	31.9	32.0	48.9	40.3	56.0
C1268	37.6	7	36.6	27.5	30.3	47.8	36.0	54.0
K646	37.1	9	37.0	21.5	33.8	41.3	36.8	55.6
K701	36.3	12	39.1	22.7	30.6	45.9	40.3	49.1
L57-0034	37.8	4	42.1	27.1	35.8	44.9	38.3	51.7
L57-2324	38.3	3	37.5	23.6	31.8	45.2	41.9	48.0
L57-3104	35.6	14	40.3	23.6	34.6	47.5	38.7	49.6
Md59-285	37.8	4	44.2	22.7	36.4	47.3	36.7	54.6
Coef. of Var. (%)			23.4	9.1	17.6	9.5	10.8	8.0
L.S.D. (5%)			4.2	5.2	NS	6.1	5.6	5.8
Row Spacing (In.)			32	36	28	38	37	36

*Not included in the mean.
[1]Three replications.
[2]Irrigated.

Table 58. (Continued)

Strain	Carbon-dale Ill.	Miller City Ill.	Co-lum-bia Mo.	Por-tage-ville Mo.[1]	Man-hat-tan Kans.	Man-hat-tan Kans.[2] *	Mound Valley Kans. *	Co-lum-bus Kans. *
Bethel	33.9	34.6	36.9	39.7	33.8	46.8	12.2	5.8
Clark	34.4	36.6	39.5	35.6	37.3	40.5	10.4	13.7
L6	36.6	34.7	39.4	32.5	39.5	43.9	11.0	10.8
L7	33.2	34.6	37.4	36.3	36.8	43.1	12.7	12.9
L8	34.4	39.6	40.5	33.2	41.2	47.5	12.5	12.0
Clark 63	34.6	38.0	37.3	37.5	38.8	44.2	11.5	12.9
SL1-H	32.4	37.0	39.7	31.9	38.7	42.5	11.0	14.5
Kent	37.9	36.1	39.6	39.1	42.4	48.8	17.5	11.1
C1220	33.3	35.9	33.8	31.4	35.3	40.4	13.9	12.1
C1266	34.3	37.7	43.5	43.3	39.2	45.5	18.2	15.9
C1268	32.9	32.9	40.8	37.3	36.9	49.2	20.4	16.0
K646	37.5	33.6	41.9	28.6	40.0	44.4	16.4	13.3
K701	33.9	36.4	34.4	33.3	36.0	42.8	13.8	20.1
L57-0034	30.1	33.8	42.5	32.7	41.1	45.5	15.4	14.7
L57-2324	33.9	37.9	39.1	41.2	40.3	50.6	9.6	16.3
L57-3104	28.4	36.0	33.7	29.1	35.0	38.5	12.6	15.9
Md59-285	35.2	32.2	39.3	36.4	37.2	45.8	15.2	7.2
Coef. of Var. (%)	--	8.2	7.4	16.9	8.0	11.1	14.0	--
L.S.D. (5%)	--	4.2	4.0	NS	4.4	NS	2.8	--
Row Spacing (In.)	40	38	38	38	40	36	36	40

Table 59. Yield rank for Uniform Test IV, 1962.

Strain	Mean of 10 Tests	Free-hold N.J. *	George-town Del.	Co-lum-bus Ohio	Wor-thing-ton Ind.	Edge-wood Ill.	Eldo-rado Ill.
Bethel	16	11	7	10	11	17	17
Clark	8	15	6	9	8	8	7
L6	12	13	14	5	16	9	15
L7	15	14	15	13	17	14	9
L8	6	6	10	6	13	10	10
Clark 63	10	8	17	16	12	7	11
SL1-H	11	17	11	13	6	5	14
Kent	2	3	4	13	1	15	6
C1220	16	15	5	17	14	16	3
C1266	1	5	1	7	2	2	1
C1268	7	12	2	12	3	13	5
K646	9	10	15	4	15	11	2
K701	12	7	11	10	7	2	13
L57-0034	4	2	3	2	10	5	8
L57-2324	3	9	8	8	9	1	15
L57-3104	14	4	8	3	4	4	11
Md59-285	4	1	11	1	5	12	3

*Not included in the mean.
[1]Irrigated

Table 59. (Continued)

Strain	Carbon-dale Ill.	Miller City Ill.	Co-lum-bia Mo.	Por-tage-ville Mo.	Man-hat-tan Kans.	Man-hat-tan Kans.[1] *	Mound Valley Kans. *	Co-lum-bus Kans. *
Bethel	9	12	14	3	17	5	12	17
Clark	6	6	8	9	10	15	16	8
L6	3	11	9	13	6	11	14	15
L7	13	12	12	8	13	12	9	10
L8	6	1	5	11	2	4	11	13
Clark 63	5	2	13	5	8	10	13	10
SL1-H	15	5	6	14	9	14	14	7
Kent	1	8	7	4	1	3	3	14
C1220	12	10	16	15	15	16	7	12
C1266	8	4	1	1	7	7	2	4
C1268	14	16	4	6	12	2	1	3
K646	2	15	3	17	5	9	4	9
K701	9	7	15	10	14	13	8	1
L57-0034	16	14	2	12	3	7	5	6
L57-2324	9	3	11	2	4	1	17	2
L57-3104	17	9	17	16	16	17	10	4
Md59-285	4	17	10	7	11	6	6	16

Table 60. Maturity, days earlier (-) or later (+) than Clark, for Uniform Test IV, 1962.

Strain	Mean of 10 Tests	Free-hold N.J.	George-town Del.	Co-lum-bus Ohio	Wor-thing-ton Ind.	Edge-wood Ill.	Eldo-rado Ill.
		*					
Bethel	+13.1	+11	+11	+5	+18	+15	+16
Clark	0	0	0	0	0	0	0
L6	+ 1.1	+ 1	0	+1	+ 1	+ 1	+ 1
L7	+ 0.1	0	0	0	+ 1	+ 2	0
L8	+ 1.8	0	+ 4	+1	+ 2	+ 2	0
Clark 63	+ 0.6	- 1	- 1	0	+ 1	0	+ 1
SL1-H	+ 0.4	+ 1	- 1	+1	0	+ 1	- 1
Kent	+ 8.6	+ 5	+ 9	+2	+12	+ 9	+10
C1220	+ 7.3	+ 9	+ 9	+2	+12	+10	+ 8
C1266	+ 2.5	0	+ 7	0	+ 7	+ 6	+ 1
C1268	+ 5.6	+ 2	+ 9	+1	+10	+10	+ 5
K646	+ 7.2	+ 7	+ 9	0	+ 9	+ 9	+ 8
K701	+ 3.0	- 2	0	+1	+ 9	+ 5	+ 1
L57-0034	+ 5.5	0	+ 9	0	+12	+ 4	+ 4
L57-2324	+ 0.8	- 2	0	0	+ 2	+ 1	0
L57-3104	+ 0.1	- 2	0	-1	+ 2	0	0
Md59-285	+ 4.8	+ 2	+ 4	+2	+ 6	+ 8	+ 5
Date planted	5-27	5-30	5-29	5-10	5-24	6-6	5-21
Clark matured	9-28	10-15	9-22	10-19	9-30	9-27	9-24
Days to mature	124	138	116	162	129	113	126

*Not included in the mean.
[1]Irrigated.

Table 60. (Continued)

Strain	Carbon-dale Ill.	Miller City Ill.	Co-lum-bia Mo.	Por-tage-ville Mo.	Man-hat-tan Kans.	Man-hat-tan Kans.[1]	Mound Valley Kans.	Co-lum-bus Kans.
						*	*	*
Bethel	+21	+12	+10	+17	+6	+9	+2	+9
Clark	0	0	0	0	0	0	0	0
L6	0	+ 2	+ 1	+ 3	+1	+1	0	0
L7	- 1	+ 1	+ 1	- 2	-1	0	0	0
L8	+ 1	+ 1	+ 2	+ 3	+2	0	0	0
Clark 63	0	0	+ 2	+ 1	+2	+1	0	0
SL1-H	0	+ 1	+ 2	- 1	+2	0	0	0
Kent	+10	+ 9	+10	+ 8	+7	+8	+2	+5
C1220	+ 7	+ 5	+ 7	+ 5	+8	+9	+2	+2
C1266	+ 2	+ 1	+ 3	+ 2	-4	+3	-3	+3
C1268	+ 8	+ 5	+ 6	+ 5	-3	+4	0	+8
K646	+ 7	+ 9	+ 7	+ 9	+5	+6	+2	+7
K701	+ 3	+ 1	+ 2	+ 1	+7	+7	+2	+2
L57-0034	+ 6	+ 6	+ 3	+ 5	+6	+6	+2	+2
L57-2324	- 1	0	+ 1	0	+5	+5	+2	0
L57-3104	+ 2	- 1	0	- 4	+3	+4	+2	0
Md59-285	+ 5	+ 5	+ 7	+ 5	+1	+3	+2	+2
Date planted	5-15	6-18	5-28	5-17	6-12	6-7	6-15	5-25
Clark matured	9-15	9-30	10-4	9-9	10-15	10-14	10-15	9-4
Days to mature	123	104	129	115	125	129	122	102

Table 61. Lodging for Uniform Test IV, 1962.

Strain	Mean of 10 Tests	Freehold N.J. *	Georgetown Del.	Columbus Ohio	Worthington Ind.	Edgewood Ill.	Eldorado Ill.
Bethel	2.1	2.0	2.0	1.2	2.0	2.2	2.6
Clark	2.2	2.0	3.0	1.0	2.3	2.8	3.3
L6	2.4	3.0	2.7	1.0	2.5	2.9	3.5
L7	2.4	3.0	2.7	1.0	2.8	2.9	3.7
L8	2.1	3.0	2.7	1.0	2.3	2.3	3.2
Clark 63	2.2	2.0	2.3	1.2	2.3	2.3	3.4
SL1-H	2.2	3.0	2.7	1.0	2.5	2.6	3.2
Kent	2.1	2.0	2.3	1.2	2.0	2.4	3.5
C1220	2.4	3.0	2.3	1.2	2.3	2.7	3.8
C1266	1.9	3.0	2.0	1.0	2.3	2.7	3.9
C1268	1.8	3.0	1.0	1.2	2.0	2.5	3.3
K646	2.4	3.0	2.7	1.2	2.5	2.2	3.7
K701	1.9	2.0	2.7	1.2	2.0	1.8	3.1
L57-0034	2.1	2.0	1.7	1.0	2.0	2.2	4.0
L57-2324	2.1	2.0	3.0	1.0	2.3	2.0	3.4
L57-3104	1.9	2.0	2.7	1.0	2.0	1.7	3.5
Md59-285	1.7	2.0	2.0	1.0	1.5	1.7	2.5

*Not included in the mean.
[1]Irrigated.

Table 61. (Continued)

Strain	Carbon-dale Ill.	Miller City Ill.	Co-lum-bia Mo.	Por-tage-ville Mo.	Man-hat-tan Kans.	Man-hat-tan Kans.[1] *	Mound Valley Kans. *	Co-lum-bus Kans. *
Bethel	3.0	2.2	2.1	1.5	1.7	2.2	1.0	1.0
Clark	2.0	2.7	1.6	1.3	2.0	3.2	1.0	1.0
L6	3.0	2.8	1.9	1.5	2.1	3.6	1.0	1.0
L7	2.5	2.8	1.7	1.5	2.0	3.2	1.0	1.0
L8	2.0	3.1	1.4	1.1	2.0	2.8	1.0	1.0
Clark 63	2.0	3.4	1.7	1.6	2.0	3.1	1.0	1.0
SL1-H	2.0	2.8	1.9	1.6	1.8	3.0	1.0	1.0
Kent	3.0	1.7	1.4	1.3	1.7	2.0	1.0	1.0
C1220	2.5	3.2	2.1	1.4	2.7	3.2	1.0	1.0
C1266	1.0	2.1	1.2	1.1	1.7	3.2	1.0	1.0
C1268	2.0	2.0	1.2	1.1	1.4	1.9	1.0	1.0
K646	2.5	3.1	1.6	1.9	2.2	2.3	1.0	1.0
K701	2.0	2.0	1.0	1.0	1.8	2.3	1.0	1.0
L57-0034	2.0	2.7	1.7	2.2	1.8	3.5	1.0	1.0
L57-2324	2.0	2.9	1.4	1.2	1.7	2.7	1.0	1.0
L57-3104	1.5	2.3	1.2	1.2	1.6	2.3	1.0	1.0
Md59-285	2.0	2.4	1.2	1.1	1.8	2.2	1.0	1.0

Table 62. Plant height for Uniform Test IV, 1962.

Strain	Mean of 10 Tests	Free-hold N.J. *	George-town Del.	Co-lum-bus Ohio	Wor-thing-ton Ind.	Edge-wood Ill.	Eldo-rado Ill.
Bethel	42	38	41	39	47	42	49
Clark	40	35	38	37	45	41	49
L6	40	37	39	36	47	41	49
L7	40	37	39	36	46	40	49
L8	39	36	38	37	45	39	48
Clark 63	41	36	40	37	48	39	49
SL1-H	40	35	39	38	45	41	49
Kent	39	38	40	36	45	39	47
C1220	44	38	47	41	45	42	55
C1266	43	37	41	38	51	44	54
C1268	40	36	39	37	47	41	49
K646	43	38	43	40	50	43	53
K701	38	35	37	37	45	39	46
L57-0034	37	36	36	36	44	37	46
L57-2324	38	36	36	36	47	38	47
L57-3104	39	37	35	39	46	39	48
Md59-285	37	37	36	38	43	39	46

*Not included in the mean.
[1]Irrigated.

Table 62. (Continued)

Strain	Carbon-dale Ill.	Miller City Ill.	Co-lum-bia Mo.	Por-tage-ville Mo.	Man-hat-tan Kans.	Man-hat-tan Kans.[1] *	Mound Valley Kans. *	Co-lum-bus Kans. *
Bethel	40	40	35	46	41	47	23	40
Clark	36	38	32	41	41	45	19	37
L6	37	38	32	40	42	48	20	39
L7	37	38	33	44	41	47	19	38
L8	34	38	32	38	40	45	18	36
Clark 63	37	40	32	41	42	46	20	38
SL1-E	36	38	33	40	40	48	19	38
Kent	34	39	32	40	40	45	21	38
C1220	42	43	35	46	41	47	23	42
C1266	39	42	35	43	40	51	19	45
C1268	36	37	33	41	40	47	20	42
K646	41	42	37	41	43	46	22	42
K701	35	37	31	36	38	43	19	37
L57-0034	33	35	31	37	38	44	19	34
L57-2324	36	37	30	38	37	42	19	35
L57-3104	35	37	32	37	38	44	19	37
Md59-285	34	36	31	37	34	43	19	35

Table 63. Seed quality for Uniform Test IV, 1962.

Strain	Mean of 10 Tests	Free-hold N.J. *	George-town Del.	Co-lum-bus Ohio	Wor-thing-ton Ind.	Edge-wood Ill.	Eldo-rado Ill.
Bethel	2.3	2.0	1.7	1.2	3.0	2.8	2.4
Clark	2.5	1.0	2.7	1.5	3.0	2.6	4.0
L6	2.8	2.0	2.7	1.7	3.0	2.8	4.3
L7	2.7	2.0	2.7	2.0	3.0	3.3	3.8
L8	2.6	2.0	2.0	2.0	3.5	2.9	4.0
Clark 63	2.6	2.0	2.3	2.0	3.0	2.8	3.4
SL1-H	2.6	2.0	2.7	1.5	3.5	2.8	3.0
Kent	2.6	1.0	2.0	2.5	3.0	3.0	3.3
C1220	2.7	1.0	3.0	3.2	2.5	3.1	3.3
C1266	2.7	1.0	2.0	3.5	3.5	3.0	3.3
C1268	2.2	1.0	2.0	2.7	2.5	2.5	2.6
K646	2.6	2.0	2.7	1.7	3.5	3.1	3.3
K701	2.7	1.0	2.0	3.2	3.0	3.1	3.5
L57-0034	2.3	1.0	1.3	1.7	3.5	2.8	3.0
L57-2324	3.0	1.0	3.3	2.2	4.0	3.3	4.5
L57-3104	2.8	2.0	3.0	2.2	3.0	2.9	3.5
Md59-285	2.2	1.0	2.3	1.2	2.5	2.8	2.5

*Not included in the mean.
[1]Irrigated.

Table 63. (Continued)

Strain	Carbon-dale Ill.	Miller City Ill.	Co-lum-bia Mo.	Por-tage-ville Mo.	Man-hat-tan Kans.	Man-hat-tan Kans.[1] *	Mound Valley Kans. *	Co-lum-bus Kans. *
Bethel	3.0	2.4	2.0	3.0	1.3	1.2	4.0	4.0
Clark	3.0	3.3	1.5	2.7	1.0	1.3	4.0	3.0
L6	4.0	3.5	1.5	2.8	1.3	1.3	4.0	3.0
L7	4.0	3.0	1.5	2.7	1.0	1.2	4.0	3.0
L8	3.0	2.8	1.5	2.9	1.0	1.2	4.0	3.0
Clark 63	4.0	3.1	1.5	2.7	1.0	1.2	5.0	3.0
SL1-H	3.0	3.4	1.5	2.9	1.3	1.1	4.0	3.0
Kent	3.0	2.9	2.5	2.5	1.3	1.2	3.0	3.0
C1220	3.0	3.0	1.5	3.0	1.0	1.4	3.0	3.0
C1266	3.0	3.1	1.5	2.6	1.0	1.3	4.0	2.0
C1268	2.5	2.0	1.5	2.4	1.0	1.2	3.0	2.0
K646	3.0	3.1	1.5	2.9	1.0	1.0	4.0	3.0
K701	3.5	2.5	1.5	3.0	1.5	1.4	5.0	2.0
L57-0034	3.0	2.5	1.5	2.6	1.0	1.1	4.0	2.0
L57-2324	4.0	3.5	1.5	2.8	1.3	1.6	5.0	3.0
L57-3104	4.5	2.6	1.5	3.0	1.3	1.5	4.0	4.0
Md59-285	3.5	2.5	1.5	2.2	1.0	1.1	4.0	4.0

Table 64. Percentage of protein for Uniform Test IV, 1962.

Strain	Mean of 7 Tests	Free-hold N.J.	George-town Del.	Co-lum-bus Ohio	Wor-thing-ton Ind.	Eldo-rado Ill.	Miller City Ill.	Co-lum-bia Mo.	Man-hat-tan Kans.
		*							
Bethel	41.1	42.6	42.2	43.6	40.1	42.4	39.1	41.1	39.0
Clark	41.8	42.5	43.8	43.7	41.5	41.6	41.5	41.6	39.2
L6	41.8	41.4	42.9	43.1	41.5	41.7	41.2	42.2	39.8
L7	42.0	42.0	43.7	44.1	41.6	41.7	41.6	42.1	38.9
L8	41.8	41.9	43.2	43.6	41.9	41.8	40.1	42.3	39.6
Clark 63	41.9	41.5	43.5	43.7	41.4	41.5	40.6	43.0	39.7
SL1-H	41.9	42.2	43.5	43.4	41.3	42.0	40.9	42.3	40.0
Kent	41.8	41.7	43.5	43.2	41.4	41.4	40.0	43.0	39.9
C1220	41.0	42.0	42.0	43.4	39.4	41.0	39.1	43.0	39.4
C1266	43.4	44.1	44.5	45.2	43.6	42.8	43.1	43.7	40.6
C1268	42.1	43.4	43.2	43.4	41.1	42.5	41.9	43.4	38.9
K646	41.9	42.7	44.4	43.3	41.9	41.9	42.0	41.9	38.0
K701	40.9	41.0	42.4	41.8	40.3	41.2	40.1	41.2	39.4
L57-0034	40.9	40.8	41.7	41.3	40.1	41.0	40.1	42.3	39.6
L57-2324	41.9	42.5	44.0	42.3	41.2	42.8	41.6	42.7	39.0
L57-3104	41.7	42.4	42.4	42.1	40.7	41.1	42.2	43.4	39.7
Md59-285	42.0	42.5	44.4	42.9	40.9	42.1	41.8	42.3	39.7

*Not included in the mean.

Table 65. Percentage of oil for Uniform Test IV, 1962.

Strain	Mean of 7 Tests	Free-hold N.J. *	George-town Del.	Co-lum-bus Ohio	Wor-thing-ton Ind.	Eldo-rado Ill.	Miller City Ill.	Co-lum-bia Mo.	Man-hat-tan Kans.
Bethel	20.6	19.0	20.4	19.9	20.6	20.8	20.8	20.8	21.2
Clark	20.9	19.3	19.7	20.1	20.4	21.6	21.6	21.3	21.8
L6	20.5	19.3	19.5	19.1	20.3	21.3	21.3	20.3	21.5
L7	21.0	19.4	19.5	19.4	21.5	21.9	22.2	21.1	21.3
L8	20.9	18.8	19.5	20.4	20.5	21.8	22.0	20.4	21.7
Clark 63	20.7	18.6	19.0	19.7	20.7	21.7	22.4	19.5	21.6
SL1-H	20.8	18.9	19.5	20.4	20.7	21.8	21.8	19.9	21.4
Kent	20.9	19.5	20.5	20.1	20.8	21.5	22.0	20.2	21.4
C1220	20.7	19.5	20.5	19.1	21.4	21.7	20.9	20.8	20.8
C1266	20.3	18.5	19.7	20.4	19.9	21.2	20.5	19.5	20.8
C1268	20.5	18.6	19.7	19.6	20.3	21.6	21.6	19.6	21.2
K646	20.5	18.4	18.6	20.3	20.8	21.1	21.0	19.9	21.7
K701	21.8	20.5	21.1	21.6	22.1	22.3	22.0	21.4	22.4
L57-0034	21.4	20.1	20.5	21.3	21.4	22.1	21.9	21.5	21.3
L57-2324	21.3	19.4	19.8	21.3	21.2	22.1	22.7	20.7	21.6
L57-3104	22.1	20.4	21.5	22.3	22.4	22.5	21.9	21.4	23.0
Md59-285	21.1	19.6	19.8	20.3	21.3	21.6	21.2	21.2	22.6

*Not included in the mean.

UNIFORM PRELIMINARY TEST IV - 1962

Strain	Originating Agency	Origin	Generation Composited
Clark	Ill. A.E.S. & U.S.R.S.L.	Lincoln (2) x Richland	F_8
Kent	Purdue A.E.S. & U.S.R.S.L.	Lincoln x Ogden	F_7
Scott	Mo. A.E.S. & U.S.R.S.L.	D49-2525 x L46-5679	F_4
S2-7158-61	Mo. A.E.S. & U.S.R.S.L.	Scott line	F_8
C1278	Purdue A.E.S. & U.S.R.S.L.	Clark x C1069	F_6
C1279	Purdue A.E.S. & U.S.R.S.L.	Clark x C1069	F_6
C1282	Purdue A.E.S. & U.S.R.S.L.	Clark x C1069	F_6
C1285	Purdue A.E.S. & U.S.R.S.L.	Clark x C1069	F_6
L60-1385	Ill. A.E.S. & U.S.R.S.L.	Hawkeye x Lee	F_9
Md59-1552	Md. A.E.S. & U.S.R.S.L.	Adams x C985	F_6
S9-632	Mo. A.E.S. & U.S.R.S.L.	PI 86145 x Clark (3)	F_5
S9-1550-1	Mo. A.E.S. & U.S.R.S.L.	L49-4091 x Clark (4)	F_3
S9-2506	Mo. A.E.S. & U.S.R.S.L.	Radiated Clark	R_5
S9-2521	Mo. A.E.S. & U.S.R.S.L.	Radiated Clark	R_5

Identification of Parent Strains

C985	F_4 line from Lincoln x Ogden, progenitor of Kent.
C1069	F_7 line from C985.
D49-2525	Pustule-resistant F_6 line from S100 x CNS, sib of Lee.
L46-5679	F_5 line from Lincoln x Richland.
L49-4091	Pustule-resistant F_4 line from L44-1219 x (Lincoln x CNS). L44-1219 is an F_3 line from Lincoln (2) x Richland.
PI 86145	Monbetsu Nagabadaizu, a narrow-leafed variety introduced from Obihiro, Hokkaido, Japan, in 1930.

Data were reported from six locations for the three checks and the eleven new strains in this test.

S2-7158-61 is one of the F_8 lines which were composited as Scott. Several such lines were tested individually and this line was selected for its high yield. In this test, it outyielded Scott at all locations except Carbondale.

Md59-1552 was retained from the 1961 Preliminary Test IV. This year it was close to Kent in yield and maturity and again had excellent lodging resistance and seed quality.

Of the remaining strains, only three, C1278, C1282, and L60-1385, outyielded Clark and none outyielded Kent on the average. They were three to five days later than Clark.

Table 66. Summary of data for Uniform Preliminary Test IV, 1962.

Strain	Yield	Rank	Maturity[1]	Lodging	Height	Seed Quality	Seed Weight	Seed Composition	
								Protein	Oil
No. of Tests	6	6	6	6	6	5	3	4	4
Clark	36.5	10	0	2.3	39	2.9	16.2	42.1	20.6
Kent	40.5	1	+ 9.2	1.9	39	2.7	18.8	41.8	20.8
Scott	37.2	7	+10.2	2.3	44	2.3	15.1	39.6	19.9
S2-7158-61	38.8	4	+ 9.5	2.3	43	2.2	14.4	39.5	19.9
C1278	39.2	3	+ 3.3	2.0	40	2.7	18.4	41.3	20.9
C1279	36.4	12	+ 0.2	2.1	40	2.9	16.6	41.1	20.9
C1282	38.6	5	+ 4.8	2.3	40	3.1	17.8	43.3	20.1
C1285	36.8	8	+ 4.3	2.1	40	2.4	16.7	41.8	20.4
L60-1385	38.6	5	+ 5.3	2.0	40	3.1	19.6	41.9	21.7
Md59-1552	39.4	2	+10.2	1.7	41	2.2	15.3	42.3	20.3
S9-632	34.8	14	- 1.3	2.5	38	2.6	14.8	41.6	20.4
S9-1550-1	35.4	13	- 0.3	2.3	39	2.6	15.8	41.1	20.9
S9-2506	36.5	10	- 0.7	2.3	39	2.9	15.7	41.4	21.1
S9-2521	36.6	8	- 1.7	2.1	39	3.0	16.5	41.6	21.1

[1]Days earlier (-) or later (+) than Clark which matured September 27, 123 days after planting.

Table 67. Disease data for Uniform Preliminary Test IV, 1962.

Strain	Bacterial Blight	Bacterial Pustule	Brown Stem Rot	Phytophthora Rot	Pod & Stem Blight	Downy Mildew		Frogeye Ind.		Purple Stain	
	Ill.	Ill.	Ill.	Ind.	Del.	Ind.	Del.	R1	R2[2]	Ind.	Del.
	a[1]	a	n[1]	a	n	n	n	a	a	n	n
Clark	2	4	4	S	3.5	2.5	3.8	R	S	3	2.0
Kent	3	2	4	S	2.0	3.0	1.1	R	R	3	3.0
Scott	3	4	4	S	2.0	3.0	4.5	Seg.	R		2.5
S2-7158-61	3	3	4	S	2.0	3.0	4.5	--	Seg.		2.0
C1278	2	2	4	S	3.0	3.0	3.3	R	R		3.0
C1279	2	2	4	S	3.0	2.0	3.5	R	R		2.0
C1282	2	4	4	S	2.5	3.0	3.7	R	S		2.0
C1285	3	3	4	S	2.5	2.5	3.7	R	R		2.0
L60-1385	4	3	4	S	1.5	2.5	1.0	--	S		2.0
Md59-1552	4	4	4	S	2.0	2.5	4.0	R	Seg.	2	2.0
S9-632	2	4	4	S		3.0		--	S		
S9-1550-1	3	3	4	S	3.0	3.0	4.0	--	S		2.5
S9-2506	2	3	4	S	3.0	3.0	3.7	--	S		2.0
S9-2521	3	4	4	S	2.5	2.0	4.0	--	S		3.0

[1]a = artificial inoculation; n = natural infection.
[2]R1 = Race 1; R2 = Race 2.

Table 68. Yield and yield rank for Uniform Preliminary Test IV, 1962.

Strain	Mean of 6 Tests	George-town Del.	Wor-thing-ton Ind.	El-do-rado Ill.	Car-bon-dale Ill.	Co-lum-bia Mo.	Man-hat-tan Kans.
Clark	36.5	20.4	46.9	45.7	25.7	38.8	41.5
Kent	40.5	22.2	53.6	58.6	25.7	37.3	45.3
Scott	37.2	21.1	47.7	55.0	27.2	31.4	40.5
S2-7158-61	38.8	23.4	49.3	62.5	21.9	33.8	41.7
C1278	39.2	22.7	56.9	55.8	17.9	41.5	40.6
C1279	36.4	24.9	48.4	48.6	21.9	39.6	35.2
C1282	38.6	22.6	47.7	58.6	22.2	42.8	37.7
C1285	36.6	22.1	49.1	55.6	21.3	36.5	34.8
L60-1385	38.6	23.7	52.2	54.1	21.8	38.8	41.1
Md59-1552	39.4	19.8	56.4	55.3	25.8	39.1	40.0
S9-632	34.8	22.5	42.0	50.4	21.2	36.1	36.6
S9-1550-1	35.4	20.8	45.5	50.8	23.8	36.2	35.5
S9-2506	36.5	22.3	47.3	46.4	23.9	40.3	38.8
S9-2521	36.6	23.2	47.1	48.1	23.6	38.0	39.6
Coef. of Var. (%)		11.9	7.4	7.3	--	--	11.2
L.S.D. (5%)		NS	7.9	NS	--	--	NS
Row Spacing (In.)		36	38	36	40	38	40
	Yield Rank						
Clark	10	13	12	14	3	6	3
Kent	1	9	3	2	3	9	1
Scott	7	11	8	7	1	14	6
S2-7158-61	4	3	5	1	9	13	2
C1278	3	5	1	4	14	2	5
C1279	12	1	7	11	9	4	13
C1282	5	6	8	2	8	1	10
C1285	8	10	6	5	12	10	14
L60-1385	5	2	4	8	11	6	4
Md59-1552	2	14	2	6	2	5	7
S9-632	14	7	14	10	13	12	11
S9-1550-1	13	12	13	9	6	11	12
S9-2506	10	8	10	13	5	3	9
S9-2521	8	4	11	12	7	8	8

Table 69. Maturity, days earlier (-) or later (+) than Clark, for Uniform Preliminary Test IV, 1962.

Strain	Mean of 6 Tests	George-town Del.	Wor-thing-ton Ind.	El-do-rado Ill.	Car-bon-dale Ill.	Co-lum-bia Mo.	Man-hat-tan Kans.
Clark	0	0	0	0	0	0	0
Kent	+ 9.2	+12	+12	+11	+ 5	+8	+7
Scott	+10.2	+13	+17	+13	+ 5	+4	+9
S2-7158-61	+ 9.5	+13	+17	+11	+ 5	+4	+7
C1278	+ 3.3	+ 1	+ 1	+ 3	+10	+2	+3
C1279	+ 0.2	- 4	- 1	- 2	+ 5	+1	+2
C1282	+ 4.8	+ 2	+ 7	+ 4	+ 7	+3	+6
C1285	+ 4.3	0	+ 7	+ 6	+ 7	+2	+4
L60-1385	+ 5.3	+13	+ 7	+ 6	+ 6	+3	-3
Md59-1552	+10.2	+12	+18	+17	+12	+5	-3
S9-632	- 1.3	- 4	- 1	- 3	+ 3	0	-3
S9-1550-1	- 0.3	- 3	0	- 2	+ 5	+1	-3
S9-2506	- 0.7	- 4	- 2	- 2	+ 6	0	-2
S9-2521	- 1.7	- 4	0	- 2	- 1	0	-3
Date planted	5-27	5-29	5-24	5-21	5-15	5-28	6-12
Clark matured	9-27	9-19	9-30	9-25	9-10	10-6	10-12
Days to mature	123	113	129	127	118	131	122

SOYBEAN DISEASE INVESTIGATIONS IN 1962

Compiled from Data Supplied by:

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Disease survey data are listed in the following table for each state in which a survey was made. The disease data are calculated as follows: severity index is determined on a 1 (no disease) to 5 (very severe infection) basis; prevalence index is based on the percent of a field infected on a 1 (1-25%), 2 (26-50%), 3 (51-75%), 4 (76-100%) basis; and the disease index = percent of fields diseased x average severity x average prevalence. Averages are based on infected fields only.

SUMMARY OF DISEASE SURVEY DATA - 1962

Disease	Percent of Fields Infected		Average Severity	Average Prevalence	Disease Index
	ILLINOIS (July 27-31)				
Bacterial Blight	56	+17[1]	2.5	3.2	4.5
Bacterial Pustule	54	+13	2.6	3.4	4.8
Brown Spot	27	+23	2.1	3.8	2.2
Downy Mildew	24	+17	2.4	3.9	2.3
Brown Stem Rot	17	+ 4	2.4	2.0	0.8
Phytophthora Rot	8	+25	2.2	1.6	2.8
Wildfire	6		tr	tr	--
Bud Blight	6		tr	tr	--
	IOWA (July 11-12, Sept. 12-13)				
Bacterial Blight	82		2.6	2.7	5.8
Brown Spot	61		2.8	2.9	5.0
Downy Mildew	61		2.6	2.8	4.4
Brown Stem Rot	42		2.7	2.2	2.5
Stem Canker	37		2.2	1.3	1.1
Bacterial Pustule	24		2.7	2.3	1.5
Root Rot	22		2.4	2.4	1.3
Wildfire	6		2.0	1.0	0.1
Yellow Mosaic	4		2.0	1.0	0.1
Phytophthora	3		2.0	1.0	0.1

[1] +17, +13, etc. indicates percent of additional fields in which a disease was found in trace amounts only. Since these amounts are not measurable, and can not be included in figuring the disease index, they are listed separately.

SUMMARY OF DISEASE SURVEY DATA - 1962 (Continued)

Disease	Percent of Fields Infected	Average Severity	Average Prevalence	Disease Index
INDIANA (July 19-20, northern half of state only)				
Brown Spot	80	2.9	4	9.4
Bacterial Blight	80	2.3	4	7.3
Bacterial Pustule	50	2.2	4	4.5
Phytophthora Rot	40	3.1	1.8	2.2
Downy Mildew	20	2.2	4	1.8
Yellow Mosaic	2	tr	tr	--
Phyllosticta	2	tr	tr	--
OHIO (July 25-27)				
Bacterial Blight	71	2.7	2.3	4.3
Brown Spot	63	2.4	2.9	4.3
Downy Mildew	31	2.0	2.9	1.8
Seedling Diseases (Rhizoc. or Pythium)	26	2.1	1.6	0.9
Phytophthora Rot	9	4.3	3.3	1.3
Bud Blight	3	tr		
Mosaic	3	tr		

MINNESOTA (June 20-July 27)

	Region	No. of Fields	Disease Index	Date
Bacterial Blight	Southern	12	0.0	June 20
	Southwest	14	2.7	July 12
	Central	12	7.5	July 27
Root Rot	Southern	12	9.9	June 20
	Southwest	14	13.7	July 12
	Central	12	8.6	July 27
Brown Spot	Southern	12	1.7	June 20
	Southwest	14	6.1	July 12
	Central	12	7.0	July 27
Downy Mildew	Southern	12	0.0	June 20
	Southwest	14	0.4	July 12
	Central	12	1.7	July 27

WEATHER CONDITIONS AND GENERAL GROWTH RESPONSES AT MOST OF THE NURSERY LOCATIONS DURING THE 1962 SEASON

The following general notes compiled from information supplied by the cooperators may be helpful in interpreting performance of the nurseries at individual locations.

Temperature and rainfall at most of the nursery locations for the 1962 season are presented in graphs at the end of this section of the report. The daily maximum and minimum temperatures and rainfall are taken from "Climatological Data" published by the Weather Bureau.

Ottawa, Ontario, Canada. The 1962 season started out hot and dry (May 15 - July 15). In June, the soybeans were irrigated twice, receiving about 1½ inches of water, which maintained normal growth. A period of below normal temperatures and above normal precipitation began in mid-July and extended into November. Even though average temperatures were below normal, the first killing frost did not occur until October 22, four weeks later than normal. The first snowfall (6 inches on October 27) occurred before harvesting was completed in our soybean breeding nursery. Fortunately, the yield trials had been harvested. The Group 0 tests did not ripen normally, and it was not possible to obtain adequate maturity readings.

Soil Type: Grenville sandy loam.
Fertilizer Application: None.
Soil Analysis: pH, 6.5.

Ridgetown, Ontario, Canada. Plant growth during the early part of the season was excellent. May temperatures were: Maximum +8.5° F. and Minimum +5.6° F. of normal. However, June, July, August, and September were below normal in temperature and above normal in rainfall. Storms in July caused severe lodging in the later maturity material which, with the below normal temperature, reduced anticipated yield considerably.

Soil Type: Brookston Clay Loam.
Fertilizer Applications: 600 lbs./A. 9-9-9 + Muriate of Potash.
Soil Analysis: pH, 6.5; OM, M; N, 80; P, 275 High; K, 125 Medium; Ca, 100 Medium-; Mg, 50 Low + .

Harrow, Ontario, Canada. Planting was later than optimum for this location and for this year's early season. Moisture and temperature were favorable during the growing season. A light frost on September 21 reduced the number of green leaves. Saddle pigmentation of the seed was quite prevalent in many lines, resulting in poor seed quality scores.

Soil Type: Harrow fine sandy loam.
Fertilizer Application: None.

Freehold, New Jersey. Moisture was in short supply until mid-June. July was below normal in moisture, 2.5 inches, and temperature, 3.4 degrees. August was cold and wet. All of this combined to seriously delay maturity. Several of the late entries were in an immature stage when the first killing frost occurred on October 25. Growth was slowed but not seriously impaired. No disease nor insect problems were encountered.

Soil Type: Sassafras sandy loam.
Fertilizer Applications: May 23, before seed bed preparation, 300 lbs. of 5-10-10 and 1800 lbs. of ground limestone.
Soil Analysis: pH, 6.8; OM, 3.6% Medium; NO_3-N, 40 lb./A. Medium; P, 90 lb./A. Very high; K, 95 lb./A. Medium; Ca, 970 lb./A. Medium; Mg, 120 lbs./A. High.

Georgetown, Delaware. Plant growth through mid-August was normal. This was true even though rainfall was below normal in May and July and temperatures were well below normal in July. There was below average rainfall in August and September. Inadequate moisture, coupled with only slightly below average temperatures in August, depressed yields markedly from the average season. Fall temperatures were below normal and rains did not occur before October, too late to help the rapidly maturing crop.

Soil Type: Norfolk loamy sand.
Fertilizer Applications: N = 0; 30 lbs./A. P_2O_5; 60 lbs./A. K_2O.
Soil Analysis: pH, 6.3; OM, 1.6%; N, --; P, 183 lbs./A; K, 87 lbs./A.; Ca, --; Mg, 169 lbs./A.

Hoytville, Ohio. Rainfall was deficient during May and June but near normal during July, August, September, and October. Temperatures were slightly above normal for May and June and slightly below normal for July, August, September, and October. The yield of Harosoy was 22.4 bushels compared to a five-year average of 31.1 bushels, 1958-1962.

Soil Type: Hoytville clay.
Fertilizer Application: None.
Soil Analysis: pH, 6.4; OM, 3.5%; P, 34 lbs./A.; K, 348 lbs./A.

Wooster, Ohio. Rainfall was deficient throughout the growing season. Temperatures were slightly above normal for May and June and below normal for July, August, September, and October. The yield of Harosoy was 23.1 bushels compared to a five-year average of 37.3 bushels, 1958-1962.

Soil Type: Wooster silt loam.
Fertilizer Application: Rye turned under.
Soil Analysis: pH, 6.9; OM, 1.5%; P, 60 lbs./A.; K, 168 lbs./A.

Columbus, Ohio. Rainfall was deficient throughout the growing season. Plots were sprinkled immediately following planting to insure germination (approximately one-half inch). Temperatures were slightly above normal during May and June but below normal for July, August, September, and October. The yield of Harosoy was 29.8 bushels compared to a five-year average of 40.2 bushels, 1958-1962.

Soil Type: Miami-Brookston silt loam.
Fertilizer Application: None.
Soil Analysis: pH, 6.4; OM, 3%; P, 100 lbs./A.; K, 324 lbs./A.

Bath, Michigan. The soybeans were sprayed twice with 4 lbs./A. of $MnSO_4$. The area was irrigated as needed and a good stand was obtained. Only the erect plots which were fairly well along toward maturity at time of frost were harvested.

Soil Type: Muck.
Fertilizer Application: None.
Soil Analysis: pH, 5.6; OM, 84; N, --; P, 80 lbs./A. Available; K, 186 lbs./A. Available; Ca, 13025 lbs./A. Available; Mg, 1296 lbs./A. Available.

East Lansing, Michigan. This area had been in alfalfa and quack grass was troublesome. Partial control was effected by a pre-emergence spray of di-nitro on June 5. Due to quack grass recovery, the area was rotary hoed June 15. Eventually, by cultivation and hoeing, the quack grass was controlled. This was a fairly good growing season and the late fall helped later maturing varieties complete their growth.

Soil Type: Loam.
Fertilizer Application: 300 lbs./A. of 5-20-20.
Soil Analysis: pH, 7.1; OM, 5.06; N, --; P, 15 lbs./A. Available; K, 86 lbs./A. Available; Ca, 3606 lbs./A. Available; Mg, 605 lbs./A. Available.

Ida, Michigan. No fertilizer was applied just before the soybeans were planted. However, during the previous year, 400 lbs./A. of 12-12-12 was applied before corn was planted and 160 lbs./A. of 4-16-16 along with the corn. The soil was somewhat dry and cloddy at planting time. At first, stands were irregular, but as the season progressed the gaps filled. The frost before complete maturity doubtless had some effect on the true dates of maturity. Fairly pleasant weather after the frost allowed the crop to mature.

Soil Type: Silt loam.
Fertilizer Application: None.
Soil Analysis: pH, 6.5; OM, 8%; N, --; P, 26 lbs./A. Available; K, 211 lbs./A. Available; Ca, 8060 lbs./A. Available; Mg, 755 lbs./A. Available.

Walkerton, Indiana. Planting was timely, June 1, with good soil and fair moisture conditions. Precipitation was deficient in each month of the growing season. Total summer precipitation was only 12.62 inches with a deficiency of -5.56 inches. Temperatures were especially high in August. There were 20 days in the growing season with temperatures of 90° F. or above. A light frost occurred September 20 with slight damage to varieties of Hawkeye maturity or later. Drouth conditions showed up rather markedly in this sandy loam soil, causing more than the usual expected variation from soil type. Uniform Preliminary Test II was severely affected by drouth in a sandy spot and was not harvested. Yields were fairly good under these drouth conditions and averaged nearly 38 bushels per acre for all tests.

Soil Type: Maumee loam.
Fertilizer Application: 200 lbs./A. 14-14-14 plowed under.
Soil Analysis: pH, 6.2; P_2O_5, 140 lbs./A.; K_2O, 112 lbs./A.

Bluffton, Indiana. Planting was timely on May 21 with good emergence conditions. Precipitation was excellent through July but somewhat below normal in August and September. There were 16 days during the growing season with temperatures of 90° F. or above. The temperature reached 100° F. on one day in August. There was some rotary hoe damage in two rows the length of the plot, thus only three replications of undamaged entries were harvested. Yields were 5 to 7 bushels below average in these tests. There was no apparent Phytophthora damage, but brown stem rot was quite prevalent

Soil Type: Nappanee silt loam.
Fertilizer Application: None.
Soil Analysis: pH, 6.0; P_2O_5, 980 lbs./A.; K_2O, 720 lbs./A.

Lafayette, Indiana. Planting was timely on May 18 and 19 with good conditions for rapid emergence. Precipitation was below normal in June and September and very excessive, with some water damage, in July. The mid-summer season was cool with only 8 days during the growing season having temperatures of 90° F. or above. The weather was conducive for the development of brown stem rot and damage therefrom. This was very prevalent in the Lafayette area. Growth and yields were about average.

Soil Type: Chalmers silty clay loam.
Fertilizer Application: 125 lbs./A. 7-28-14 in row.
Soil Analysis: pH, 6.1; P_2O_5, 105 lbs./A.; K_2O, 207 lbs./A.

Greenfield, Indiana. Planting was timely on May 17 with good emergence conditions. June was exceptionally dry and July excessively wet with 0.70 and 9.18 inches of precipitation, respectively. There were only 12 days in the growing season with temperatures of 90° F. or above. These were distributed throughout the season. Phytophthora root rot and brown stem rot were both very abundant and damaging. Average yields at Greenfield were 8 to 10 bushels per acre lower than usual for this soil type and fertility.

Soil Type: Brookston-Crosby Complex.
Fertilizer Application: 165 lbs./A. 8-32-0.
Soil Analysis: pH, 6.1; P_2O_5, 660 lbs./A.; K_2O, 234 lbs./A.

Worthington, Indiana. Planting was delayed somewhat until May 24. Emergence was excellent and growth was excellent throughout the season. Precipitation was above or near normal throughout the season except for a fairly dry September. Temperatures averaged below normal for June through September. However, there were 25 days in the growing season when the temperature was 90° F. or above. There were short hot periods in July and August. Green stemmed plants and irregular maturity were quite marked. There was considerable downy mildew and brown stem rot present. Yields were about equal to or slightly better than the previous high for this location. Harvest conditions were only fair to good.

Soil Type: Genessee silty clay loam.
Fertilizer Application: 200 lbs./A. 5-20-20.
Soil Analysis: pH, 7.7; P_2O_5, 543 lbs./A.; K_2O, 209 lbs./A.

Evansville, Indiana. No tests were harvested due to hail damage.

Ashland, Wisconsin. The 1962 growing season at this location was generally characterized by below normal temperatures and above normal rainfall. Only the month of May had above normal temperature and only April and July had a little below normal rainfall. About mid-May we received several heavy rains and the rains continued through the month. This made it difficult to get corn and soybeans planted on time. Most of these crops went into the ground late. June was plagued by above normal rainfall but the most serious drawback was the frequency of the rain and the very cool temperatures. June had 3.2 degrees below normal for a mean temperature; July followed with 5.3 degrees below the normal mean. Although July had a little

below normal rainfall, there were no serious drouth conditions. In general, the whole season had ample moisture. August temperatures were nearly normal, but the mean temperature in September was 1.5 degrees below normal. Because of the cool wet season, the development and ripening of crops such as corn and soybeans were very slow. It is truly amazing that the soybeans did as well as they did.

Soil Type: Ogema Fine Sandy Loam.
Fertilizer Applications: 10 ton of manure plowed under and 400 lbs. of 5-20-20 drilled in with grain drill before seeding.

Spooner, Wisconsin. Soil conditions at planting time, May 29, were ideal due to above normal rainfall and temperatures for the month. Temperatures in July were 5.2 degrees below normal and rainfall .53 inches above normal. Dry weather the first half of the month had very little effect, if any, on growth. Temperatures in August were 1.9 degrees below normal and rainfall was .19 inches below normal with the bulk of it occurring after August 22. The trial was irrigated August 10 with one and one-half inches of water. Temperatures were 1.9 degrees below normal in September, but rainfall was 1.04 inches above normal with excellent distribution. Killing frost occurred September 20, when the temperature dropped to 25 degrees.

Durand, Wisconsin. Temperatures averaged above normal in May, normal in June, and below normal during the remainder of the growing season. While total rainfall was above normal, several drouth periods markedly reduced growth and seed yield. The soil is a fine sandy loam where short drouth periods can reduce yields. Yields of early varieties were reduced more than later varieties.

Soil Type: Boone Fine Sandy Loam.
Fertilizer Application: 100 lbs. 0-20-20.
Soil Analysis: pH, 6.0; P, 110; K, 125.

Madison, Wisconsin. Temperatures averaged above normal during May and June and below normal during the rest of the season, being 4° F. below normal in July and September. Rainfall was about 4 inches below normal during the growing season. Stand and growth were good. Yields were reduced by lack of rainfall; however, owing to the cool weather, the loss from drouth was minimized. There was little damage from diseases and insects. A light frost occurred September 19 which did not appreciably affect the later varieties.

Soil Type: Miami Silt Loam.
Fertilizer Application: 200 lbs. 0-20-20.
Soil Analysis: pH, 7.1; P, 128; K, 215.

Shabbona, Illinois. Planting was in late May in a moist seedbed. Emergence and stands were good. Growth was good but lodging occurred in late summer. Grasshoppers infested the field in late August and stripped up to one-third of the foliage from the plants. Leaves on the Group II plants were killed by frost before maturity. August was very dry. There was a light epiphytotic of bacterial blight in early summer, but no other diseases were noted.

Soil Type. Drummer silty clay loam.
Fertilizer Application: None.
Soil Analysis: pH, 7.0; P_1, 21 lbs./A ; P_2, 120+ lbs./A.; K, 254 lbs /A

Dwight, Illinois. Planting was the first week of June in a moist seedbed. Growth was only fair, due to drouth. Potassium deficiency was noted in early July, causing stunting throughout the test. Downy mildew, bacterial blight, stem canker, and brown stem rot were present in the test in light to moderate amounts.

Soil Type: Elliott silt loam.
Fertilizer Application: None.
Soil Analysis: pH, 7.1; P_1, 38 lbs./A.; P_2, 120+ lbs./A.; K, 233 lbs./A.

Urbana, Illinois. Planting was in mid-May in a cloddy seedbed with many corn stumps. Heavy rain two days after planting caused crusting which hindered emergence. May was warmer than normal and July was one of the wettest months on record, giving excellent growth and considerable lodging. Residual atrazine from a 1961 application for corn stunted the plants. Bacterial pustule, bacterial blight, and downy mildew were present in moderate amounts. Stem canker was very prevalent.

Soil Type: Catlin and Flanagan silt loam.
Fertilizer Application: None.
Soil Analysis: pH, 6.4; P_1, 35 lbs./A.; P_2, 120+ lbs./A.; K, 300+ lbs./A.

Girard, Illinois. Planting was in mid-May in a good seedbed with plenty of moisture. Emergence and stands were good. Stem canker was frequently observed and there was moderate to heavy bacterial pustule, bacterial blight, and downy mildew. Growth was excellent and yields were high.

Soil Type: Harrison silt loam.
Fertilizer Application: None.
Soil Analysis: pH, 6.6; P_1, 19 lbs./A.; P_2, 84 lbs./A.; K, 200 lbs./A.

Edgewood, Illinois. Planting was the first week in June in a good seedbed. Emergence and stands were good. Phytophthora rot thinned stands of susceptible varieties in low spots in the field. Many diseases were present, with moderate downy mildew, moderate to very heavy brown spot, slight bacterial pustule, slight to severe bud blight, and some brown stem rot.

Soil Type: Cisne silt loam.
Fertilizer Application: 130 lbs. 60% K.
Soil Analysis: pH, 6.5; P_1, 32 lbs./A.; P_2, 93 lbs./A.; K, 300 lbs./A.

Eldorado, Illinois. Planting was in mid-May in an excellent seedbed. Seedling emergence was very good and growth was good. The field was very dry by mid-August and the plants dropped a lot of pods. Yields were excellent and seed quality was better than normal for this location. There was some killing of plants due to residual atrazine from a 1961 pre-emergence application to corn. Plants were lodged on August 6 by rain and wind. There was slight to heavy bacterial pustule over the entire field in July, with moderate bacterial blight and downy mildew following in August.

Soil Type: Silt loam.
Fertilizer Application: 165 lbs./A. 4-10-10.
Soil Analysis: pH, 7.0; P_1, 29 lbs./A.; P_2, 120+ lbs./A.; K, 200 lbs./A.

Carbondale, Illinois. Planting was in mid-May and emergence was somewhat irregular with gaps in stands. Rainfall during the early part of the growing season gave good growth. The growth during the latter part of the season was retarded due to a shortage of rain. An increase in rainfall during the maturing period retarded the maturity date and harvesting of the late varieties. Seed quality ranged from fair to very poor.

Soil Type: Stoy silt loam.
Fertilizer Application: 300 lbs./A. 0-20-20.
Soil Analysis: pH, 6.4.

Miller City, Illinois. Planting was after mid-June and poor stands were obtained. Due to late planting, growth was not very good. Unevenness of fertility caused one-third of the field to be shorter than the rest. There was some damage from residual chlorate. The only disease noted was a slight to moderate infestation of downy mildew.

Soil Type: Riley fine sandy loam.
Fertilizer Application: None.
Soil Analysis: pH, 7.4; P_1, 107 lbs./A.; P_2, 120+ lbs./A.; K, 300 lbs./A.

Crookston, Minnesota. The Group 00 and 0 tests were planted at the normal time despite generally excessive rainfall and wet soil conditions in May. Stands were good. Development was about normal despite abnormally cool mid- and late-summer temperatures. Much of the Group 00 material was mature by the first week of September. On September 10, a hailstorm caused some shattering on the earliest varieties. Yields in these nurseries are therefore considered to be of small value.

Soil Type: Fargo silty clay loam.
Fertilizer Application: None.

Morris, Minnesota. The Group 0 trial at Morris grew under rather favorable conditions. Moisture was adequate nearly all season. Temperatures were somewhat below average in July, August, and September. Stands were good and fertility of the soil was good. This was considered a satisfactory test even though varietal differences were small.

Soil Type: Barnes silt loam.
Fertilizer Application: None.

St. Paul, Minnesota. The Group 00, 0, and I trials (including the Preliminary trials) were completely hailed out on June 23. Some trials of Minnesota lines were replanted on June 26 but these suffered the effects of a second hailstorm on July 21.

Lamberton, Minnesota. The Group II trial grew under ample moisture conditions most of the season. The stands were good. The soil fertility was good. In common with other locations, temperatures averaged below normal in mid- and late-summer. This was considered a quite satisfactory trial. As in years past, the strains of Group II maturity performed relatively better at Lamberton than at Waseca. That is, strains such as Harosoy and Lindarin often show an advantage over Chippewa in southwestern Minnesota but seldom do so in the south-central and southeastern parts of the state.

Soil Type: Webster clay loam.
Fertilizer Application: None.

Waseca, Minnesota. The Group I and II trials had good stands and developed normally. Moisture was adequate the entire season. Temperatures averaged lower than normal in July, August, and September. Light frost on September 20 killed the top 3 or 4 inches of the plants but a subsequent month of warm weather permitted the late Group II material to mature rather well. Soil fertility in these plots was high.

Soil Type: LeSueur silty clay loam.
Fertilizer Application: Barnyard manure on alfalfa sod.

Cresco, Iowa. This nursery is located in northeast Iowa on Carrington Plastic Till Phase soil which is tight, cold, wet, slowly drained, and low in productivity. The nursery was planted on May 24 on corn land. Due to a heavy rain immediately after planting, the nursery was lost because of extremely poor stands which could not be salvaged by transplanting.

Soil Type: Carrington Plastic Till Phase.
Fertilizer Application: 40 lbs./A. K_2O.
Soil Analysis: pH, 6.4; OM, Medium; N, 75 lbs./A.; P, 7.5 lbs./A. Low; K, 176 lbs./A.

Sutherland, Iowa. This nursery represents the northwest section of Iowa with Primghar silt loam soil, medium high in productivity, and generally slightly undulating in topography. The nursery was planted May 8 on corn land. Stands were excellent, and plots were kept weed-free. Temperatures for May through September averaged 1.0° F. below normal with June, July, August, and September departing -1.6, -3.7, -1.1, and -3.1° F., respectively. A light frost on September 20 did some damage to late maturing strains. Growth response, yields, and lodging were considered above average. Disease was of little consequence throughout the season.

Soil Type: Primghar silt loam.
Fertilizer Application: None.
Soil Analysis: pH, 7.3; OM, Medium + ; N, 84 lbs./A.; P, 5.5 lbs./A. Low; K, 228 lbs./A.

Kanawha, Iowa. This nursery is located in north-central Iowa on level, productive Webster silt loam. Planting was completed on May 22 on land previously in corn. Stands were generally good to excellent, and plots were kept weed-free. There was an unusually low incidence of bacterial blight and other diseases in the nursery. During the growing season, temperatures averaged 1.6° F. below normal. Although precipitation was slightly deficient in May, June, and September, the over-all average from May through September was 4.3 inches above normal. Several heavy storms in July and August caused excessive lodging. These conditions permitted about average growth, but above normal yields, and lodging which was difficult to assess. A light frost on September 20 damaged some of the late maturing strains.

Soil Type: Webster silt loam.
Fertilizer Application: None.
Soil Analysis: pH, 7.1; OM, High; N, 93 lbs./A.; P, 21.0 lbs./A. High; K, 220 lbs./A.

Independence, Iowa. This nursery is located in northeast central Iowa on well drained Carrington silt loam, medium in productivity. Planting was completed on May 21. Stands were good and plots were kept weed-free. Temperatures averaged 1.2° F. below normal. Precipitation was 0.6 inches below normal for May through September. Growth, yield, and general response were just normal. Lodging due to storms was greater than normally encountered. Light frost occurred on September 20, earlier than normal, and injured some late maturing strains.

Soil Type: Carrington silt loam.
Fertilizer Application: 40 lbs. K_2O.
Soil Analysis: pH, 6.6; OM, Medium, N, 75 lbs./A.; P, 7.0 lbs./A. Low; K, 140 lbs./A.

Ames, Iowa. This nursery is centrally located on level, productive Webster silt loam. Planting was completed on May 1 with subsequent stands excellent. Temperatures averaged slightly below normal. Precipitation for the season was 3.3 inches below normal with May and July the only months above normal. Growth, yield, and general response were average. A low incidence of diseases occurred. Light frost occurred on September 20 before the normal date of October 5 causing slight damage to late maturing strains.

Soil Type: Webster silt loam.
Fertilizer Application: None.
Soil Analysis: pH, 8.1; OM, High; N, 78 lbs./A.; P, 2.5 lbs./A. Very low. K, 180 lbs./A.

Ottumwa, Iowa. This nursery is in southeastern Iowa on flat, very productive Haig silt loam. The nursery was planted June 1. Stands were good and weeds were controlled. Temperatures averaged 0.5° F. below normal. Precipitation averaged slightly above normal with the greatest departures occurring in May (4.8) and July (2.5). Growth and yield response were slightly above average because of the good moisture in July and not a serious deficit in any month. Lodging was excessive. Killing frost occurred on October 24, later than normal (October 10).

Soil Type: Haig silt loam.
Fertilizer Application: None.
Soil Analysis: pH, 6.1; OM, Medium, N, 96 lbs./A., P, 19 lbs./A. High, K, 268 lbs./A.

Columbia, Missouri. Uniform tests were planted after a long dry spell was broken by a three-fourth inch rain. Soil was in perfect condition and emergence rapid. Stands were very thick. Very little rain fell during June and July and plants grew very slowly. By August 10, there was a deficit of 5 inches for the growing season and, with the heavy stands, plants were showing stress. Two and one half inches of water was applied August 11-12. This probably benefited later groups more than early ones. Yields were good in Group IV with some 40-bushel yields on 30 inch plants. Dudding was widespread and severe on some varieties. Kent plants all showed green stems and leaves with ripe pods, but plants were normal in appearance and yields good. No other disease problem was present and the field was weed-free.

Soil Type: Mexico Silt Loam.
Fertilizer Application: None.
Soil Analysis: pH, 7.5; OM, 1.8 Average, P, 224+ lbs./A. High, K, 150 lbs./A. Average, Ca, 4500 lbs./A. High; Mg, 100 lbs./A. Low.

Portageville, Missouri. A dry period at planting caused poor stand in some tests. Amiben was used as a pre-emergence treatment on all tests planted on or before May 14. Considerable chemical damage was observed in these tests throughout the season. Conditions were very favorable for growth except for a period of drouth during the middle of August. Irrigation by flooding was applied August 21 to 23. A period of heavy rainfall began 2 days after irrigation. Excessive rainfall retarded maturity in Group IV tests and interfered with harvest.

Soil Type: Salix Silt Loam.
Fertilizer Application: 200 lbs. 0-20-20.
Soil Analysis: pH, 5.0; OM, 1.3%; P, 212 lbs./A. High; K, 220 lbs./A. Medium; Ca, 2500 lbs./A. Medium; Mg, 300 lbs./A. High.

Portage la Prairie, Manitoba, Canada. This test was planted rather late, June 6, due to a very wet spring. Germination was excellent and plant development very rank, resulting in serious lodging. Precipitation was considerably above average during the growing season. June temperatures averaged slightly above average, while the remaining part of the growing season was below average.

Soil Type: Riverdale Silty Clay.
Fertilizer Application: None.

Winnipeg, Manitoba, Canada. The season was extremely wet. Precipitation from the beginning of May to the end of August was almost 100 percent above normal. The temperature in June was 3.4° F. above normal and slightly below normal for the rest of the season. The tests were planted on May 29. Early growth was excellent. The performance of strains could not be evaluated due to severe hail damage which occurred on July 24.

Soil Type: Riverdale Silty Clay.
Fertilizer Application: None.
Soil Analysis: pH, 7.3; P_1, 57 lbs./A.; P_2, 196 lbs./A.; K, 300+ lbs./A. (1959 analysis).

Brandon, Manitoba, Canada. Growing conditions were very good and there was ample moisture. Temperatures in July and August were below normal. Very little disease was observed and no insect problems developed. The 1962 test was as good as could be expected to be produced in this area.

Morden, Manitoba, Canada. This test was planted rather late, June 2, due to a very wet spring. Germination was excellent and plant development above average. There was 17.7 inches of rain from May 1 to August 31 compared to 10.4 inches on the average. June temperatures averaged 1.8 degrees per day above average while the rest of the summer was below average. July averaged 3.5 degree days below average. There was a high incidence of bacterial blight.

Soil Type: Altona Association Very Fine Sandy Loam.
Fertilizer Application: None.
Soil Analysis: pH, 7.4.

Eureka, South Dakota. The seedbed was fall plowed. In the spring, 150 pounds of 16-20-0 commercial fertilizer per acre was added before the seedbed was double disked and double harrowed. There was ample soil moisture to germinate the seed. The rainfall throughout June and the early part of July was ample to produce a

normal soybean crop, but during the latter part of July, August, and September, moisture became very short, causing stunting of the plants and poor pod set. The entire growing season was cool, below average, delaying maturity at least 10 to 14 days. The first killing frost was October 15.

Soil Type: Sandy Loam.
Fertilizer Application: 150 lbs. 16-20-0.

Watertown, South Dakota. The seedbed was fall-plowed. In the spring, 150 lbs. of 16-20-0 commercial fertilizer per acre was added before the seedbed was double disked and double harrowed. There was ample soil moisture to germinate the seed. Throughout June and the early part of July there was ample moisture received to produce a normal soybean crop but during the latter part of July and through August and September, moisture became very short, causing stunting of the plants and poor pod set. The entire growing season was cool, below average, delaying maturity by at least 10 to 14 days. The first killing frost was September 20.

Soil Type: Kranzberg.
Fertilizer Application: 150 lbs. 16-20-0.

Brookings, South Dakota. The seedbed was fall-plowed. There were 200 pounds per acre of 16-20-0 commercial fertilizer added at the time of plowing. In the spring the seedbed was double disked and double harrowed. At planting time and throughout the growing season there was an abundant supply of moisture. The entire growing season was very cool, somewhat below average, which delayed maturity at least 10 to 14 days. There was a killing frost on September 20 before any of the varieties showed signs of dropping their leaves. This delayed the season and hard frost produced many green seeds.

Soil Type: Barnes.
Fertilizer Application: 200 lbs. 16-20-0.

Centerville, South Dakota. The seedbed was fall-plowed. There were 200 pounds per acre of 16-20-0 commercial fertilizer added at the time of plowing. In the spring the seedbed was double disked and double harrowed. At planting time and throughout the growing season there was ample moisture. The growing season was somewhat cool but not as slow a season as at Brookings. There was no killing frost until September 20.

Soil Type: Poinsett.
Fertilizer Application: 200 lbs. 16-20-0.

Concord, Nebraska. These tests were not good for evaluating strains. Stands and growing conditions were good and test plots looked fine during the season but the analysis of variance showed that coefficients of variability ran as high as 17 and 18 percent. Differential killing from a light frost may have contributed to this variability.

Manhattan, Kansas. Planting was delayed because of excessive rainfall in late May and early June. Growing conditions were very favorable throughout the growing season except for a severe hot week beginning August 19. Irrigated plots lodged severely, especially Group III test. Irrigations were made June 19, July 7, and August 7 to the irrigated test. A total of eight inches was applied in furrows and one inch in June by sprinklers.

Soil Type: Unnamed series.
Fertilizer Application: None.
Soil Analysis: Dryland -- pH, 5.7; OM, 3.75; P, 49; K, 550 lbs./A.; Exch. Ca, 6,800 lbs./A.; Exch. Mg, 1,056 lbs./A.
Irrigated -- pH, 8.0; OM, 1.2; P, 41; K, 516 lbs./A.; Exch. Ca, 8,560 lbs./A.; Exch. Mg, 74 lbs./A.

Mound Valley, Kansas. A severe drouth occurred in this area during the growing season followed by a record breaking amount of rainfall during the month of September. This wet September delayed maturity two to three weeks. The soybean plants were very slow in shedding their leaves even though the pods were mature. A noticeable number of immature pods were dropped early, possibly because of the drouth.

Fertilizer Application: 0-30-30 and 3 tons of lime.
Soil Analysis: pH, 5.8; OM, 1.6; P, 21; K, 142; Ca, Recommended 3 tons of lime.

Columbus, Kansas. Soybean growth was excellent during June and July, however, high temperatures and inadequate moisture in August were the factors responsible for low yields. Disease and insect infestations were not a problem.

Soil Analysis: pH, 5.7; OM, .9; P, 10 lbs./A.; K, 116 lbs./A.

Othello, Washington. No mosaic was apparent in the nurseries at this location. The season was cool and the soybeans were later in maturing than usual. These nurseries were irrigated before seeding and then, beginning June 20, irrigated every 12 days. Soil moisture was never limited.

Soil Type: Shano silt loam.
Fertilizer Application: 10 lbs. Zn.; 80 lbs. P_2O_5/A.
Soil Analysis: pH, 7.5; OM, 0.6; P, 18.0 Medium (Sodium bicarbonate extractant); K, 300 Medium (Sodium bicarbonate extractant).

Prosser, Washington. Considerable mosaic showed up in the nurseries about midsummer. The season was abnormally cool with a resulting delay in maturity. These nurseries were irrigated before seeding and then, beginning June 26, irrigated every 12 days. Soil moisture was never limited.

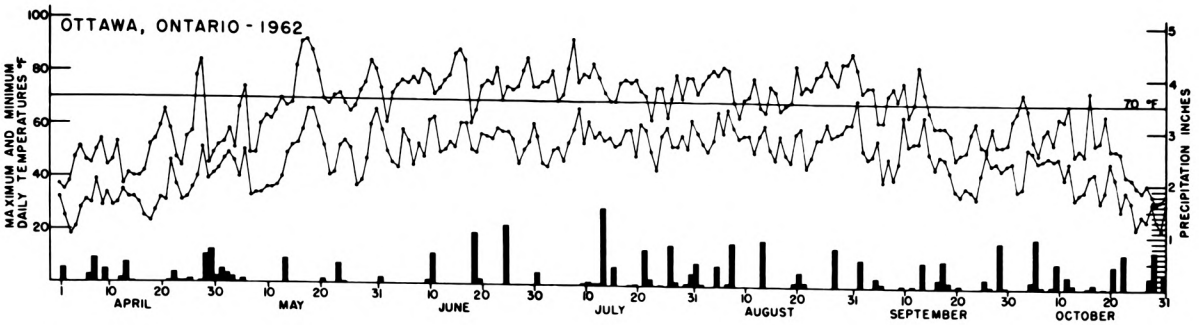
Soil Type: Sagemoor fine sandy loam.
Fertilizer Application: 10 lbs. Zn; 60 lbs. P_2O_5/A.
Soil Analysis: pH, 8.2; OM, 1.5; P, 26 High (Sodium bicarbonate extractant); K, 450 High (Sodium bicarbonate extractant).

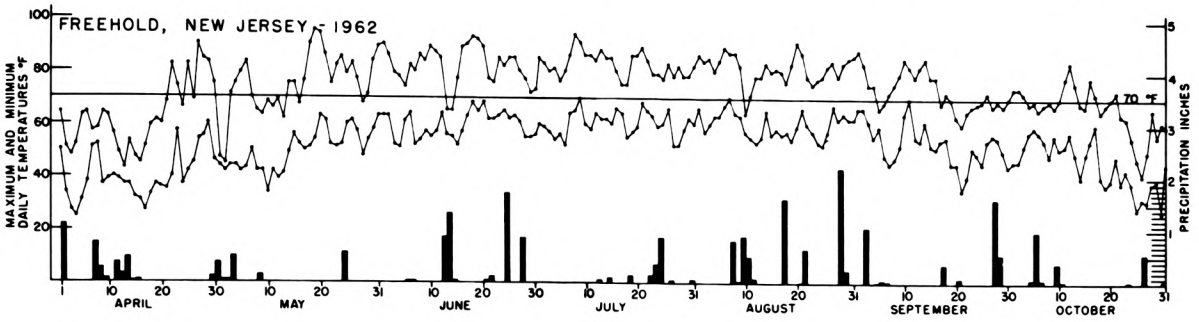
Ontario, Oregon. Several weeks of cold wet weather with beating rains followed planting on May 8 and 9. Emergence was extremely slow and stands were reduced. Stand counts ranged from 20 to 50 plants per 10 feet of row. The season was unusually windy, resulting in severe lodging in Groups 0 and I, and was cooler than normal, delaying maturity by at least a week. Mildew was noted for the first time at this location and yields were reduced in the few replications where it was present. Group 00 varieties received five irrigations between June 23 and August 7. Group 0 and I lines had an additional irrigation on August 16. The nursery is considered poor for Group 0 and I strain comparisons, and only fair for comparisons in Group 00.

Soil Type: Owyhee Silt Loam.
Fertilizer Application: 95 lbs./A. P_2O_5.
Soil Analysis: pH, 7.6; P_1, 25 lbs./A.; P_2, 120+ lbs./A.; K, 740 lbs./A.

Medford, Oregon. The soybeans were planted May 3 in a well-prepared seedbed. The fertilizers were banded June 15. Neither weeds, diseases, nor spider mites presented a serious problem. The growing season was cooler than normal with night temperatures being well below the long-time average. Approximately 18 inches of irrigation water was applied by sprinkling and about two inches of rain fell during the growing season. The plants grew exceptionally tall and lodging was generally severe. No shattering was observed. The soybeans were all harvested before any killing frost occurred.

Soil Type: Medford loam.
Fertilizer Applications: 60 lbs. N; 60 lbs. P_2O_5; 60 lbs. K_2O.
Soil Analysis: pH, 6.1; OM, 3.97%; P, 10 lbs./A. Low; K, 0.26 me Medium; Ca, 12.3 me; Mg, 2.3 me.


OTTAWA, ONTARIO - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


FREEHOLD, NEW JERSEY - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
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AUGUST
SEPTEMBER
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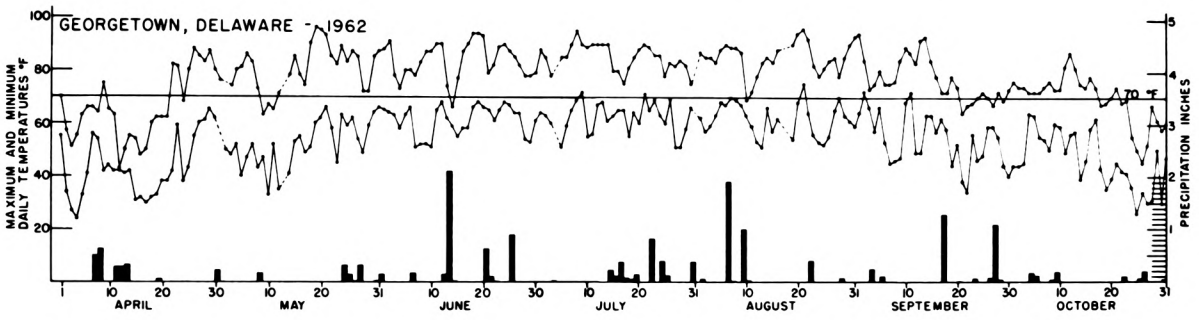
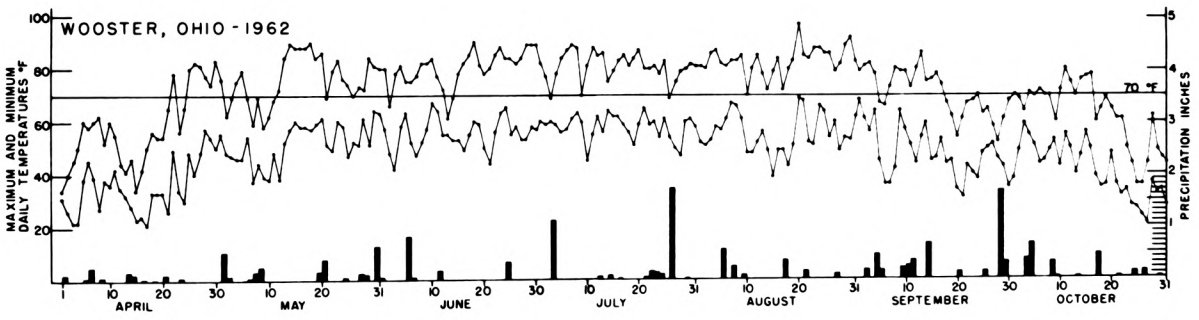

GEORGETOWN, DELAWARE - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


WOOSTER, OHIO - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
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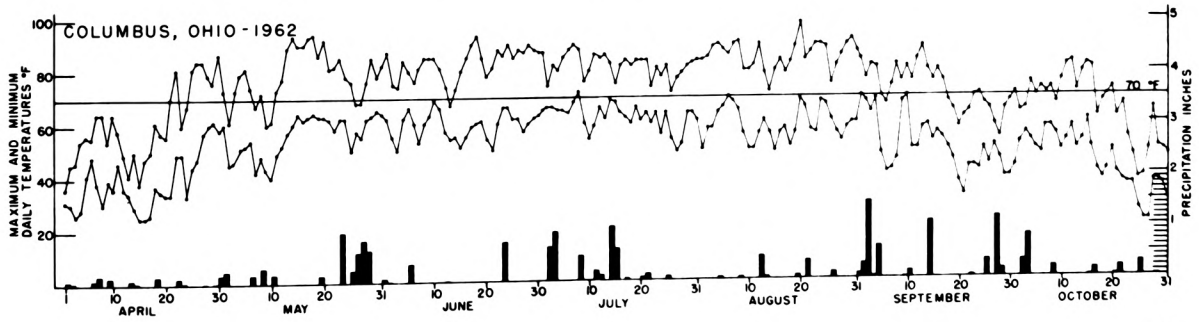
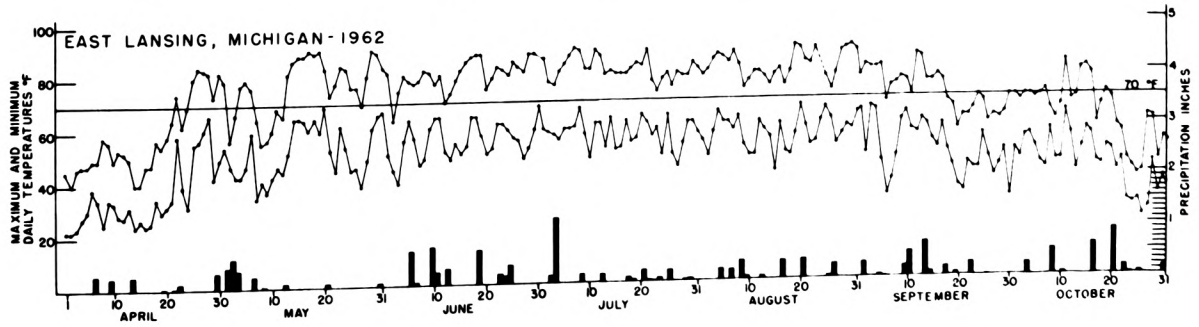
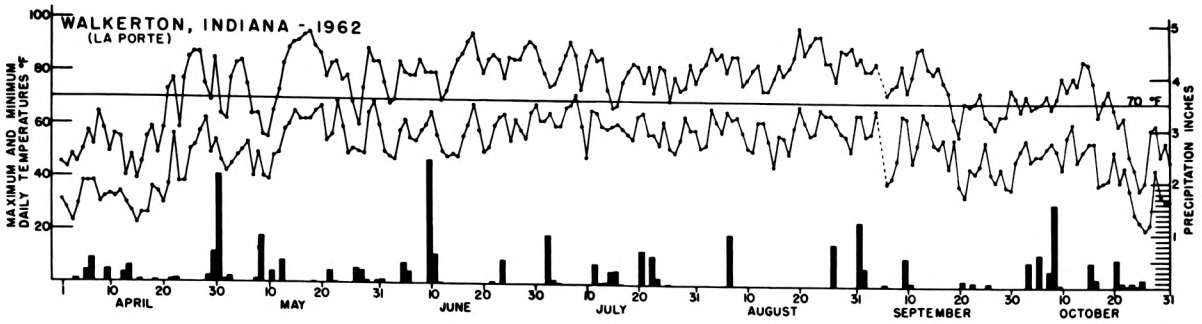
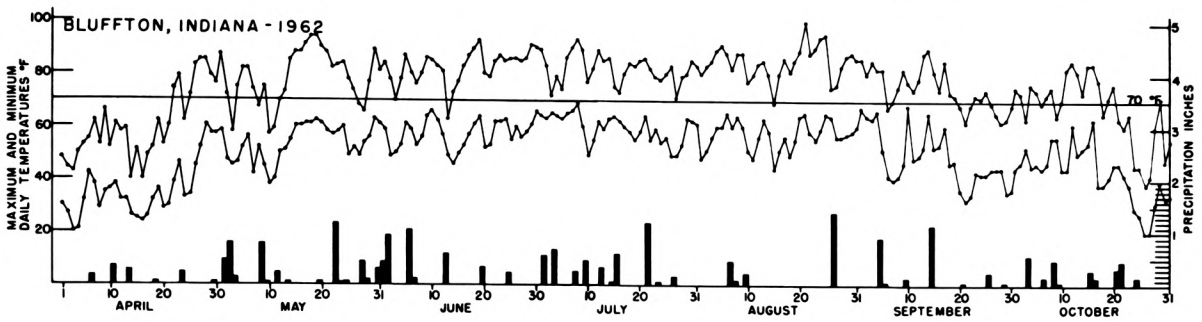
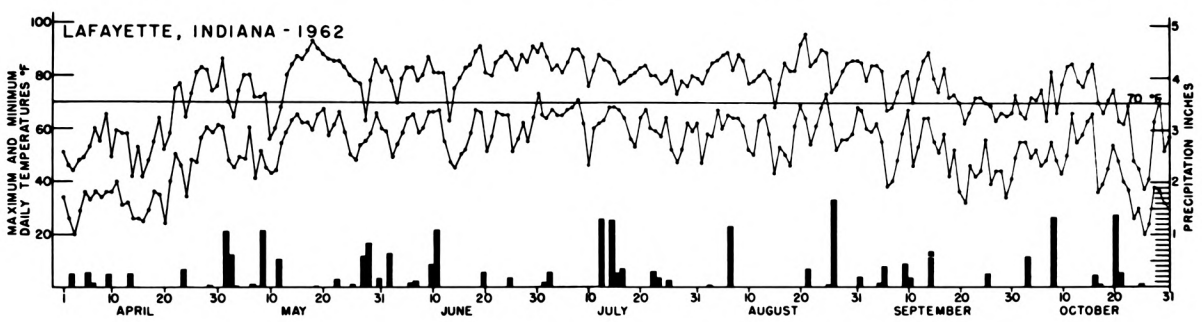
AUGUST
SEPTEMBER
OCTOBER

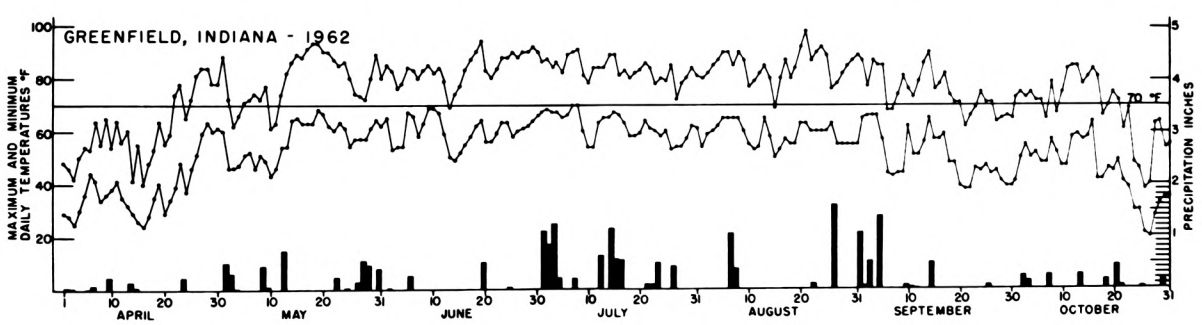

COLUMBUS, OHIO - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

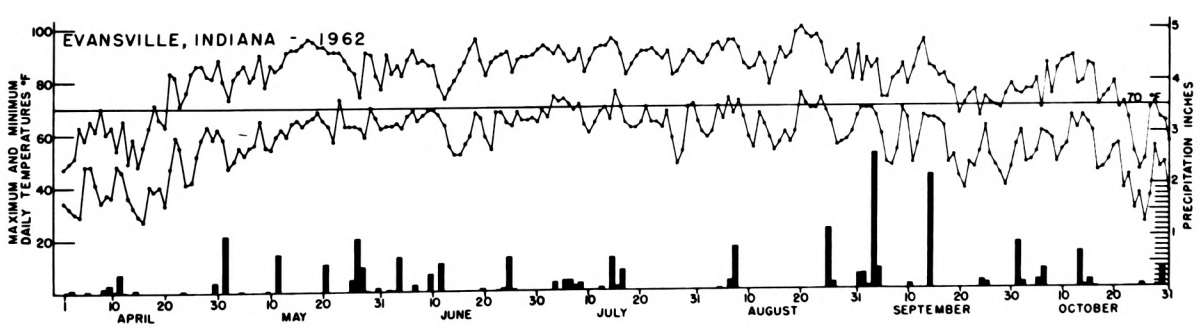

EAST LANSING, MICHIGAN - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

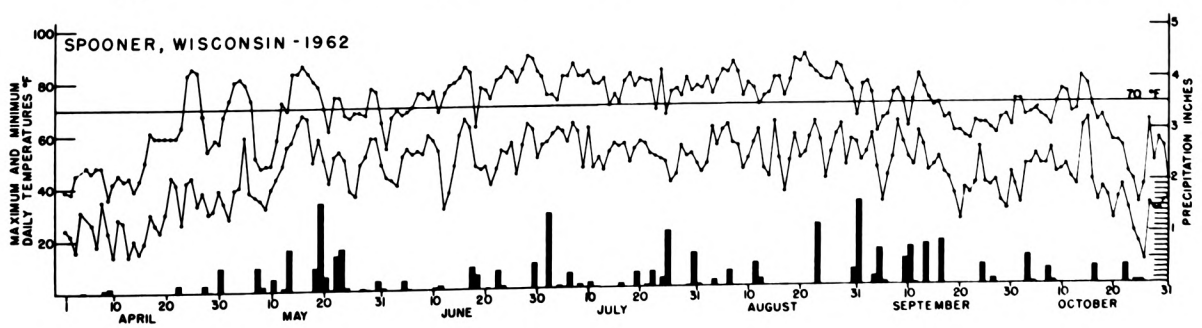

WALKERTON, INDIANA - 1962
(LA PORTE)
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

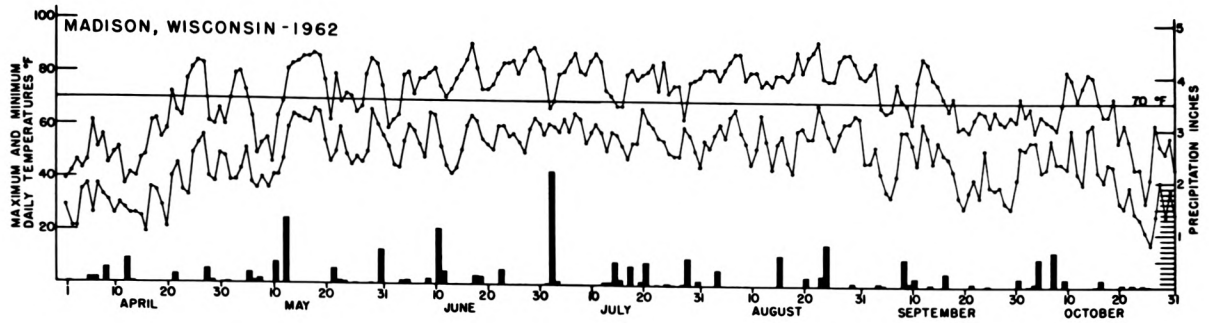

BLUFFTON, INDIANA - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

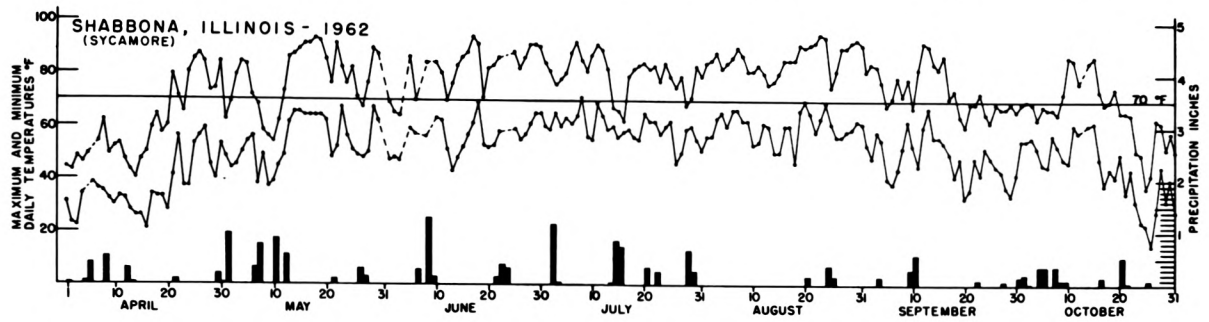

LAFAYETTE, INDIANA - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

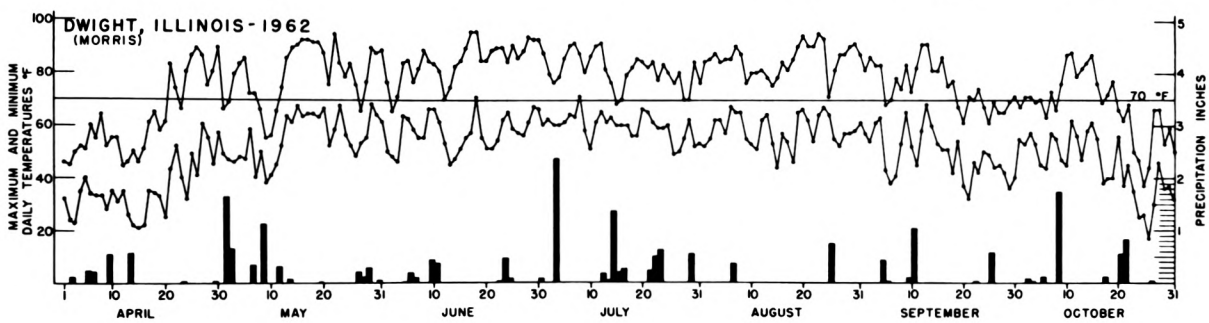

GREENFIELD, INDIANA - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

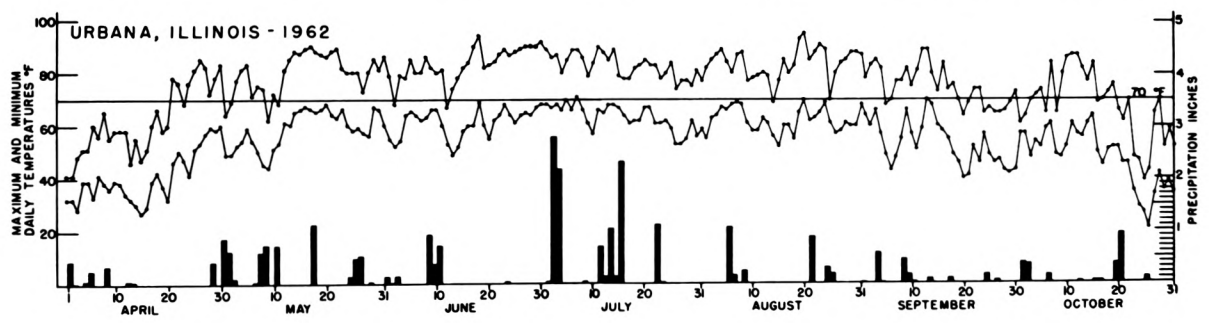

EVANSVILLE, INDIANA - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

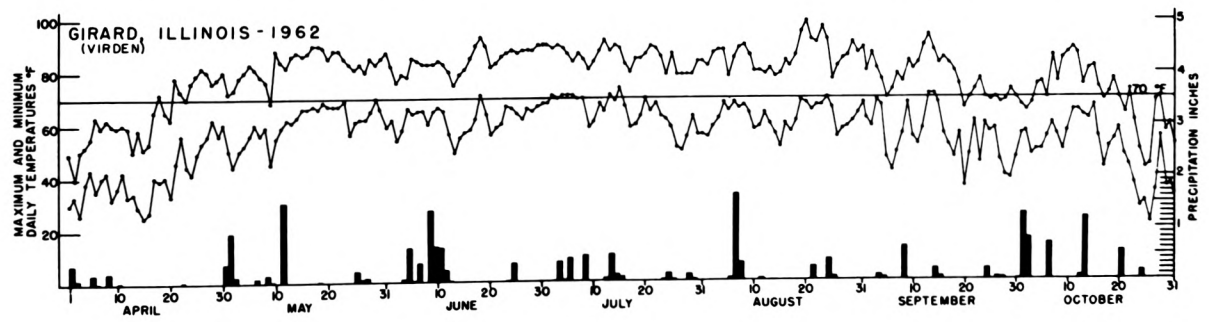

SPOONER, WISCONSIN - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

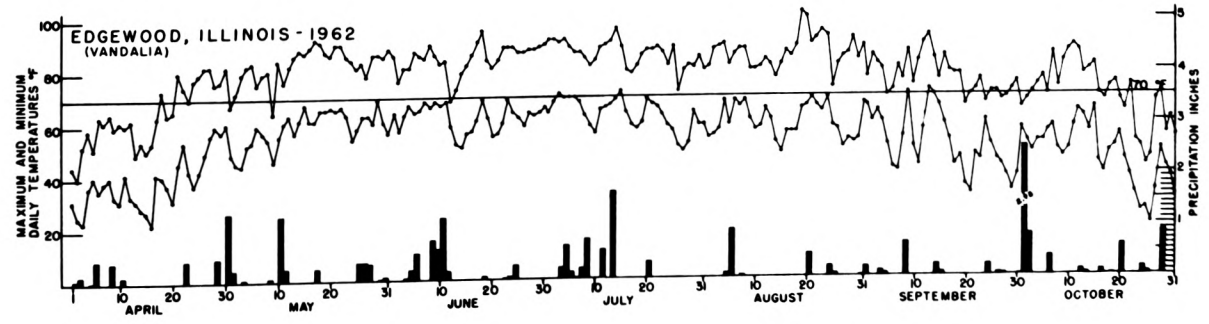

MADISON, WISCONSIN - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

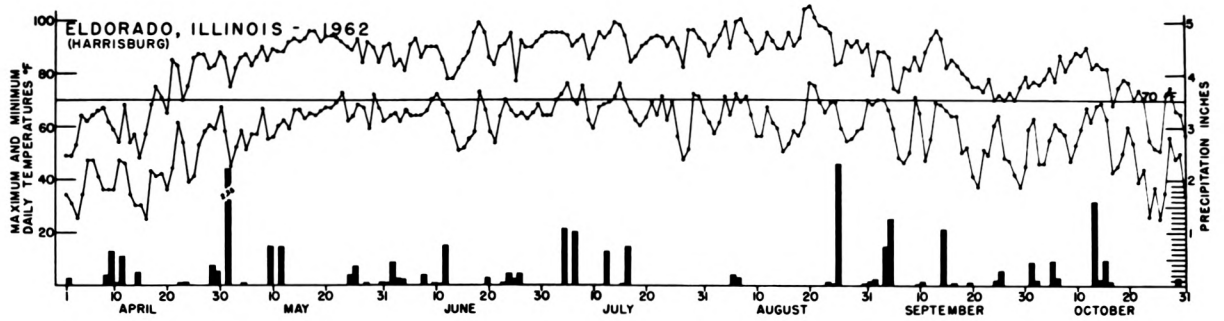

SHABBONA, ILLINOIS - 1962
(SYCAMORE)
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

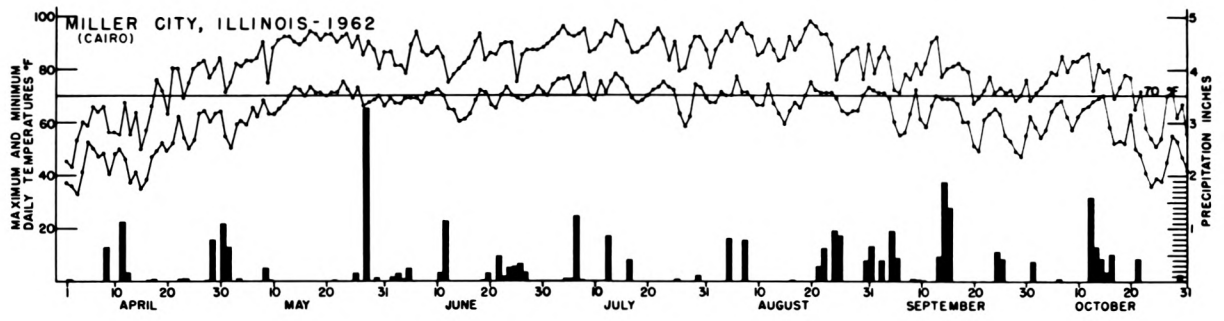

DWIGHT, ILLINOIS - 1962
(MORRIS)
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

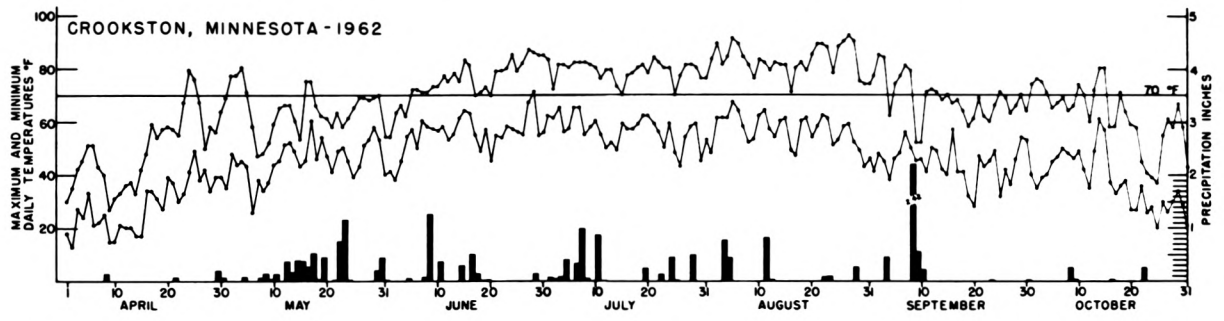

URBANA, ILLINOIS - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

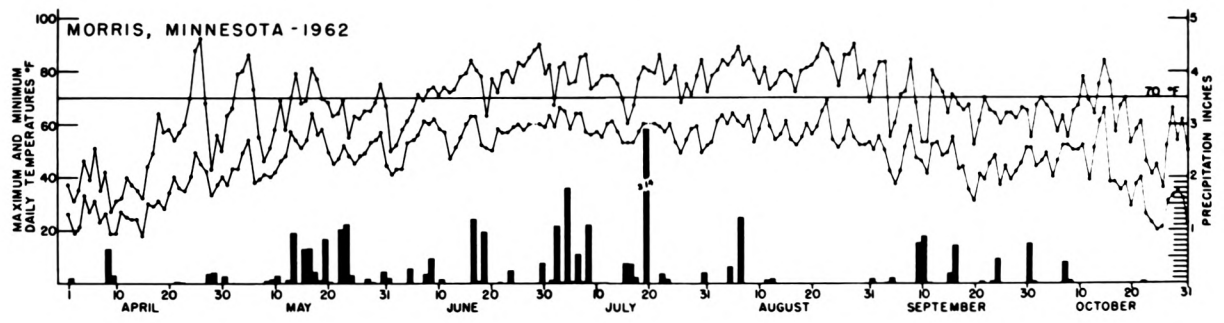

GIRARD, ILLINOIS - 1962
(VIRDEN)
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

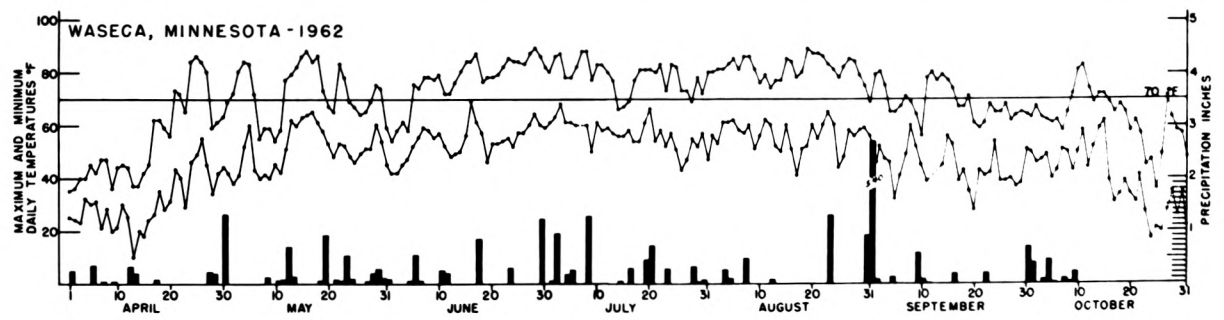

EDGEWOOD, ILLINOIS - 1962
(VANDALIA)
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

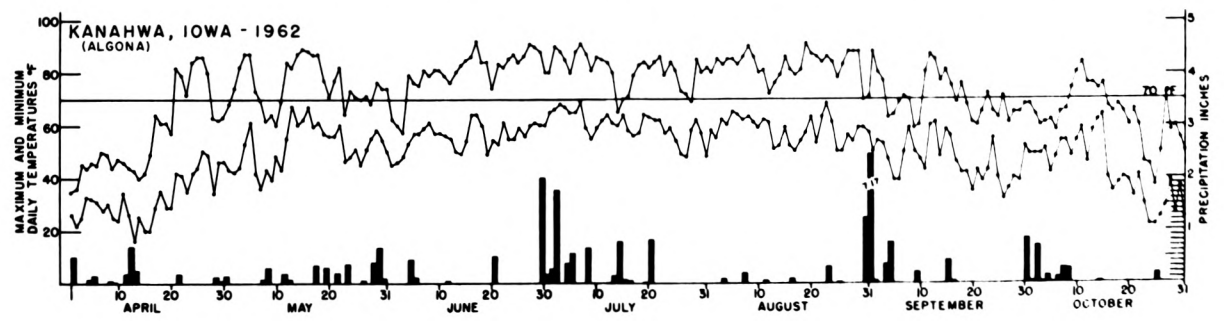

ELDORADO, ILLINOIS - 1962
(HARRISBURG)
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

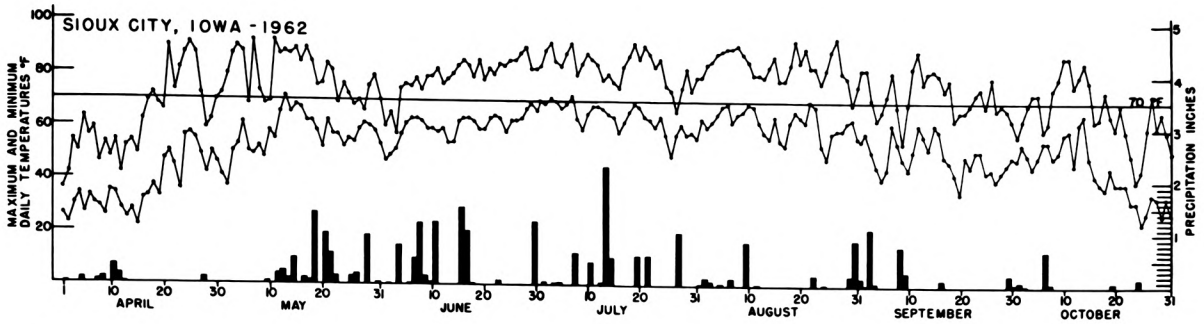

MILLER CITY, ILLINOIS - 1962
(CAIRO)
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

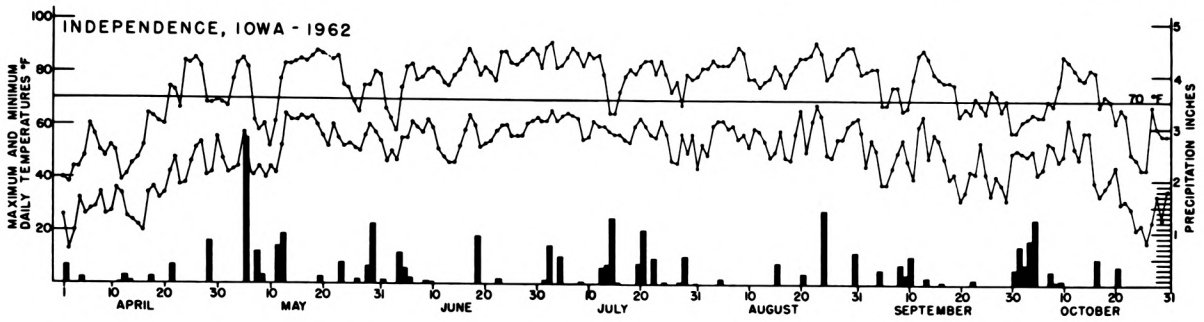

CROOKSTON, MINNESOTA - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

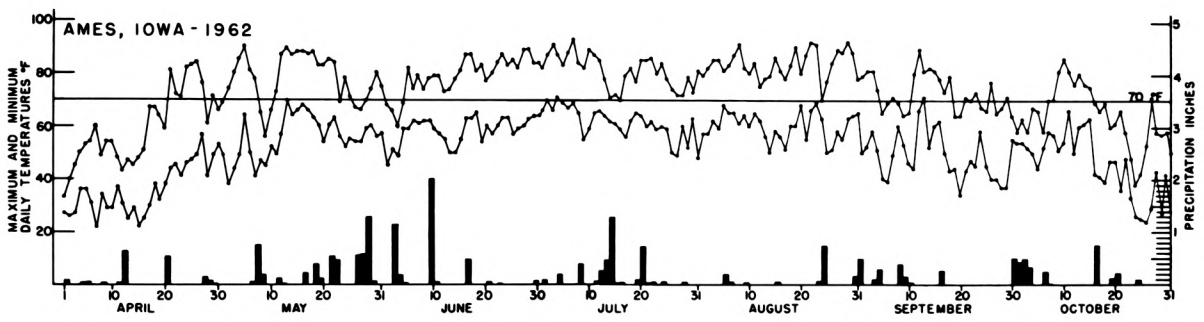

MORRIS, MINNESOTA - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

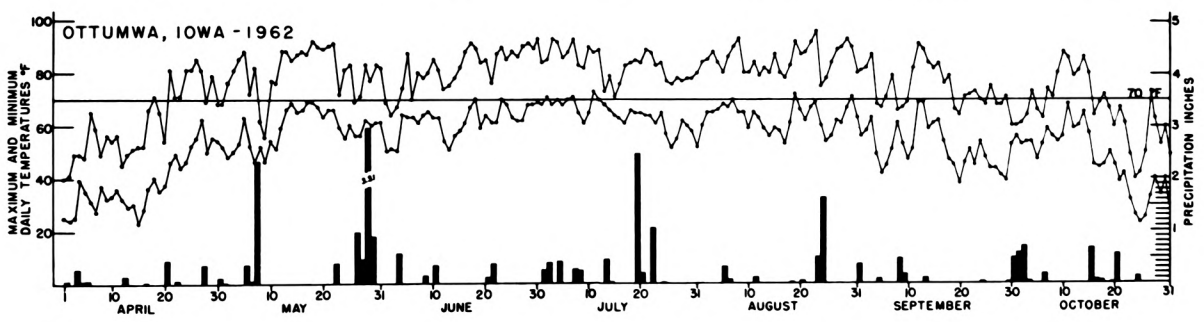

WASECA, MINNESOTA - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

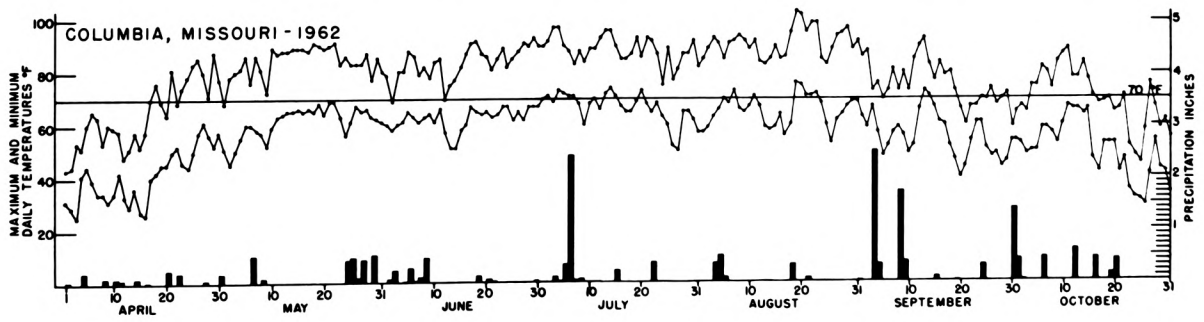

KANAHWA, IOWA - 1962
(ALGONA)
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

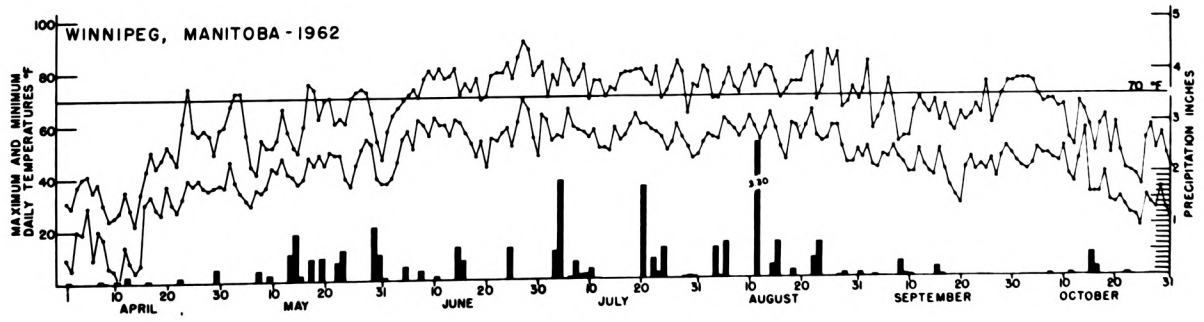

SIOUX CITY, IOWA - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

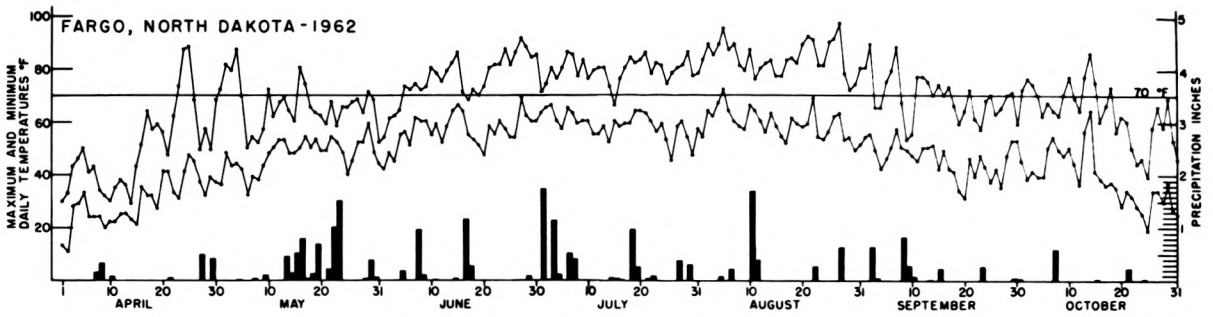

INDEPENDENCE, IOWA - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

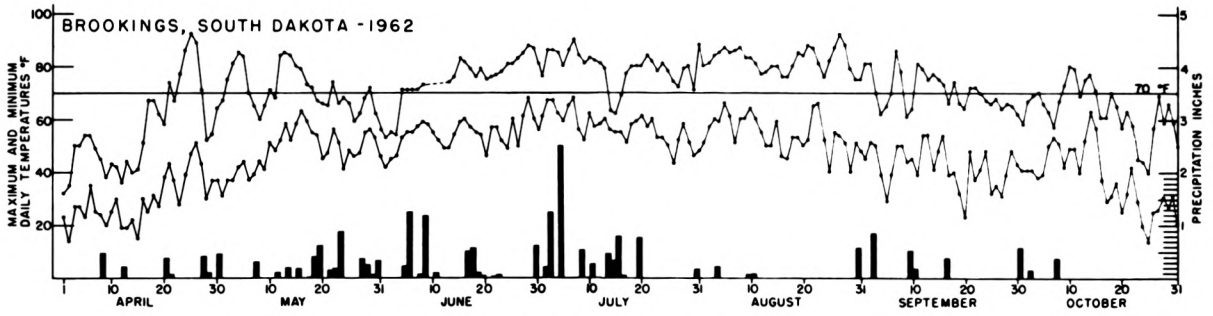

AMES, IOWA - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


OTTUMWA, IOWA - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
3.31
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


COLUMBIA, MISSOURI - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


WINNIPEG, MANITOBA - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
3.30
70 °F
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


FARGO, NORTH DAKOTA - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


BROOKINGS, SOUTH DAKOTA - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
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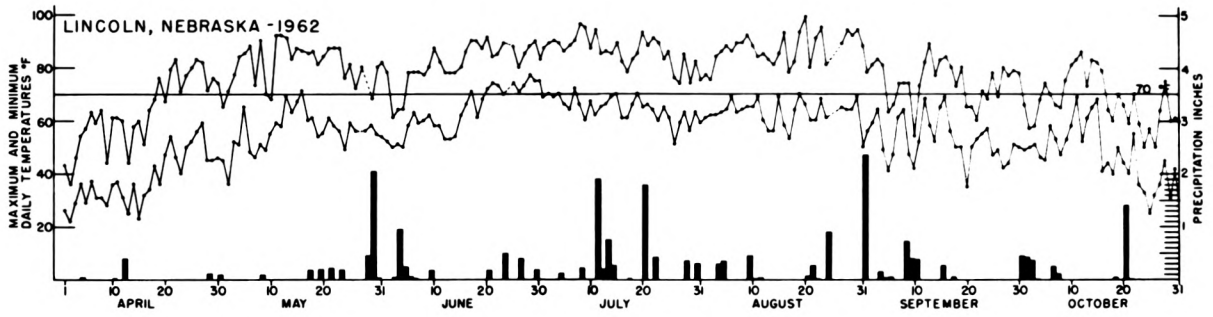
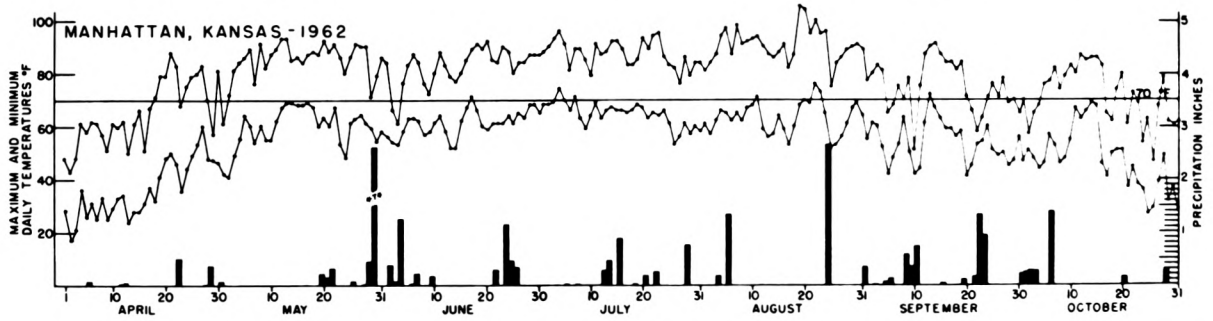
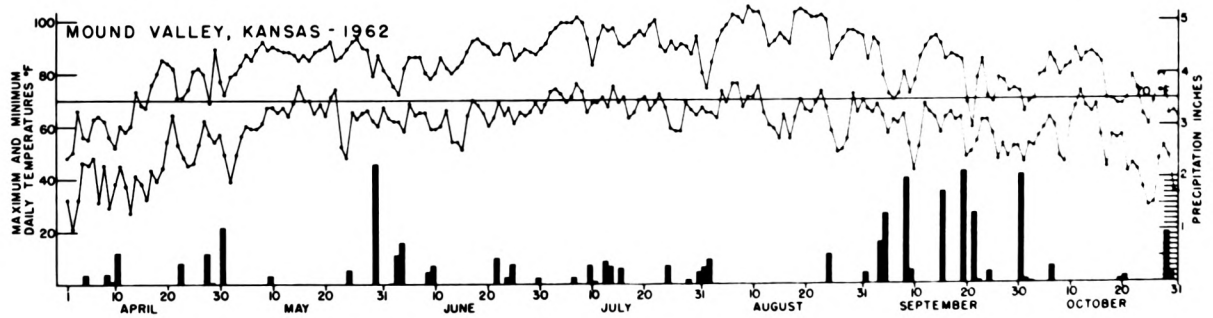
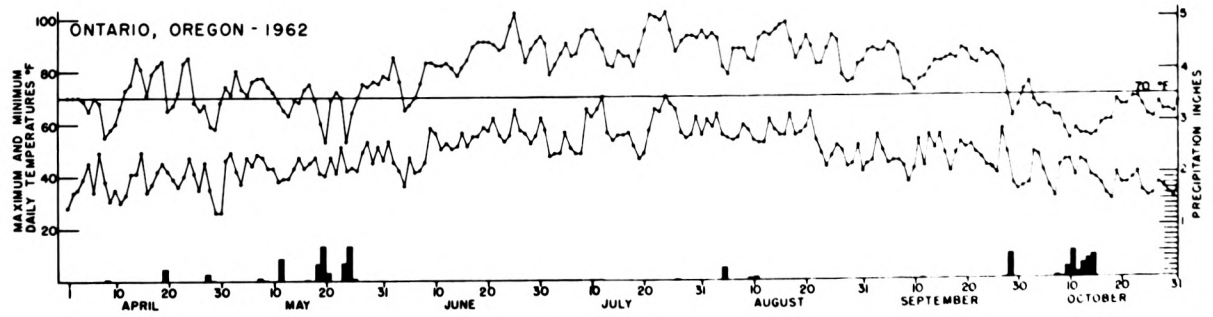
AUGUST
SEPTEMBER
OCTOBER


LINCOLN, NEBRASKA - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


MANHATTAN, KANSAS - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


MOUND VALLEY, KANSAS - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


ONTARIO, OREGON - 1962
MAXIMUM AND MINIMUM DAILY TEMPERATURES °F
PRECIPITATION INCHES
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER